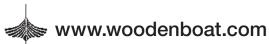
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Cover: Sam Jones fits a hood end on the lobsterboat RESOLUTE at John's Bay Boat Co. in 2012. The 42' RESOLUTE now fishes year-round out of Stonington, Maine.

Pages 80 and 86

Photograph by Sam Murfitt



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EDITOR'S PAGE

Meet the Crew

A confluence of friends old and new brought together the two fine articles in this issue on the Maine lobsterboat RESOLUTE. The spark came from author Jennifer Eaton Larrabee, who shares her wonderful meditation on the boat's construction beginning on page 86. She and her husband, Ryan, a lobsterman, commissioned the boat with designer-builder Peter Kass. After the project commenced in 2012, the Larrabee family made weekly trips from their home in Stonington to the shop, pitching in on the job and watching the boat take shape. Those experiences, and the launching, are the basis of Jennifer's article, and they give us a rare client's-eye perspective of a lobsterboat-building project—a perspective missing from our previous coverage of Peter (WB Nos. 115 and 227). The launching of RESOLUTE added to a growing fleet of Kass-built boats in Stonington, which has the largest concentration of them anywhere.

Jennifer's essay would have made a fine story on its own, but a recent viral Facebook video detailing the work of fisherman-photographer Joel Woods inspired a companion article. "I do not consider myself an artist," Joel states on his website (joelwoods. zenfolio.com). "Nor do I refer to myself as a photographer. Firstly, I am a fisherman, and have been since I was a teenager." That said, the images in that video, and Joel's commentary, reveal a man with a poetic understanding of commercial fishing and the sea, and a command of the camera. We asked Joel to join the crew of RESOLUTE for a day of hauling in late spring, and he enthusiastically agreed to the idea. But, then, who to caption those images?

Years ago, I got to know Brian Robbins, who grew up around lobsterboats, spent his early career offshore, and has made a career of writing "about everything from lobsterboats and salmon farming to Keith Richards and Keith Jarrett." That's according to his website (brianrobbins.com), where you can read about his fascinating (and entertaining) transformation into a professional writer and editor. I'd not seen Brian for over a decade, but his distinctive writing voice impressed me back then, and I've kept up with his career online. Today, he's the senior contributing editor (he says: "I'm not sure what that means, but it makes me sound old") of *Commercial Fisheries News*; as such, he continues to cover the fishing industry, but has lately been a full-time freelance writer, exploring a range of subjects. Brian agreed to bring his deft and insightful prose to interpreting Joel's images.

Photographer Sam Murfitt deserves a shout-out, too, as part of this crew. One of his images appears in the article beginning on page 86, and another appears on this issue's cover. Sam is an experienced wooden boat builder, and has worked on some large and significant projects. He's also had a career as a commercial photographer. Today, he combines these interests, documenting Maine's changing working waterfront. He's focused particularly on lobstering and its related industries, and has spent a good deal of time in Peter Kass's shop, as well as at Maine's annual lobsterboat races.

We're grateful to this fine band of contributors. Their passions and individual voices combine to give us a unique look at a shop, a boat, and a fishery.

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LETTERS

Boatbuilding in Oakville and Bronte

I very much enjoyed the article in WB No. 249 on PIPE DREAM, boatbuilding in Bronte, Ontario, and the connection to C&C Yachts. That may be due to my having moored a (plastic) boat in Bronte Harbour since 1975, at a time when the Greb family were still the operators. My initial reaction on turning to page 58

was "That's not PIPE DREAM!" That's because the PIPE DREAM I know best is a different boat—a design shown in *Skene's Elements of Yacht Design*, as revised by Francis F. Kinney. At least that name got my attention.

To add to the fairly recent information you have: Bronte Harbour has a long history of wooden boat building. Fishing tugs for the Lake Erie fleet were built there and delivered via the Welland Canal. Later, Metro Marine would complete the fitting-out of hulls built elsewhere.

Oakville Harbour, about 3 nm east of Bronte, also had a history of wooden boat building. Initially the yards there built commercial schooners, but when the railways took over freight transport, some builders closed while others turned to pleasure craft.

The article mentioned the yacht CANADA. Everyone seems to know the origin of the AMERICA's Cup, but too few on the north shore of Lake Ontario know the origin of the CANADA's Cup. In 1896, the Lincoln Park Yacht Club of Chicago challenged the Royal Canadian Yacht Club (RCYC) to a race series. The series was to be between their yacht VENCEDOR and a similar yacht from RCYC. A consortium from RCYC had CANADA designed by William Fife III, to be skippered by Æmilius Jarvis, who is mentioned in your article on PIPE DREAM. She was built by Capt. James Andrews's yard in Oakville. The frames and keel pattern were shipped from Scotland-but they weren't accompanied by a lines drawing or table of offsets! In the series held in Toledo, Ohio, CANADA narrowly defeated VENCEDOR, winning two of the three races.

The cup for this race was made by Tiffany's and presented by the City of Toledo. It was then presented to RCYC as trustees, "to be held for International Racing between yachts representing Yacht Clubs on the Great Lakes, either in Canada or the United States, and to be known as 'CANADA's Cup.'"

Hugh Ramsay Oakville, Ontario

Curve of Areas

Dear Editor,

As an enthusiastic amateur, I have looked over lots of boat plans over the years but don't think I have seen before the "curves of areas" shown in the plans of SERENA on page 104 of WB No. 249. I wonder if you could explain their meaning.

Many thanks as always for your interesting publication.

Regards, Les Sim via email

Dear Les,

The curve of areas represents the volume of water displaced by the hull. "Areas" refers to the area of each hull section below the waterline. When these are presented on a graph, the space beneath the "curve of areas" represents the boat's displacement, and the shape



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of the curve represents the distribution of the boat's volume. Boats are typically fuller in their midsections, and leaner in their ends; that's why the typical curve of areas is more or less bell-shaped.

—Eds.

Kudos for the Art Department

Hi WoodenBoat,

The art direction on the cover of the latest issue of *WoodenBoat* (No. 249) is beautiful, sublime, and perfect. The red masthead is gutsy. I'm not even a powerboat guy and I found myself drooling over ALBATROSS III. Well done.

Joe Berkeley joeberkeley.com

A Few Wiring Notes

Dear Editors:

Congratulations on the 250th issue. It's beautiful, inspiring, and informative, as always. After reading the "Getting Started" section, I have a few minor criticisms regarding the section on bilge pump wiring.

The graphic illustrating the tools needed to install a bilge pump shows a cheap, stamped steel-type "crimper" which is a "freebie"-type tool typically supplied when you buy a plastic kit of assorted crimp connectors. Such a tool should *never* be used to crimp connectors. It does not crimp, it crushes the connector, and it only crushes over a very narrow width, resulting in a high-resistance, mechanically weak connection. If you hire someone to do wiring on your boat (or anywhere else) and you see him using this type of tool, find someone else to do your wiring.

A proper crimp tool has a die with a particular shape to crimp correctly, or the die is an integral part of its jaws. It makes a crimp of the correct shape, depth, and width for the connector and wire size. For these types of wire connectors, a proper crimp tool is not expensive, and can save a lot of electrical headaches down the road. Thomas & Betts model WT-111m is one such

Erratum

In our article about the Charles Sibbick–designed half-rater DIA-MOND in WB No. 250 (May/June, 2016), a photo caption gives an erroneous location for the Boat Building Academy, where the boat was built. The school is located in the United Kingdom at Monmouth Beach, Lyme Regis, Dorset. Learn more about the school at www.boatbuildingacademy.com.

tool, so are Klein's 1005, 1006, and J1005 models. The orange big-box store sells something similar to these for less than \$15.

The graphic illustrating the wiring of dual bilge pumps used the wrong term to name the control switches. They were labeled as "double pole," when they are in fact "single pole, double throw" (SPDT) switches. (Actually, these

are most likely "center-off, single pole, double throw.")

These are minor criticisms, and these details only jumped out at me because of the many wiring failures I've come across in my field of work. All in all, still a beautiful issue; Keep up the good work!

Josh Aranov

Winthrop, MA



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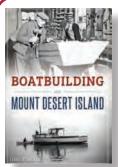
Subtitled "Working with Epoxy Cleanly & Efficiently." If you thought you could do a better job with your epoxy work, you'll no doubt find more than enough info within these 46 pages to help out. The focus is on gluing, filleting, as well as glassing and coating. The tips and techniques are from Russell Brown, a person with experience at doing this type of thing in a very tidy fashion. Several folks have taken the time to write to us, saying this is one of the best pieces they've read on the topic. Not exactly faint praise. \$5.99

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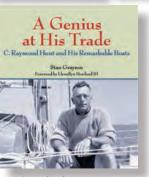
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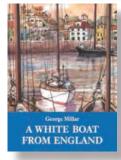
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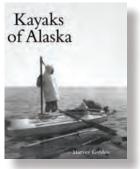
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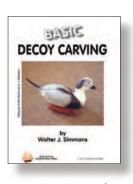
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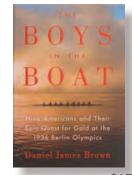
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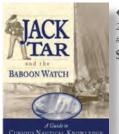
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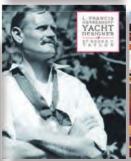
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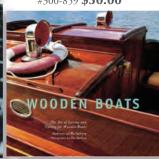
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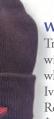
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All the news that's fit to ponder

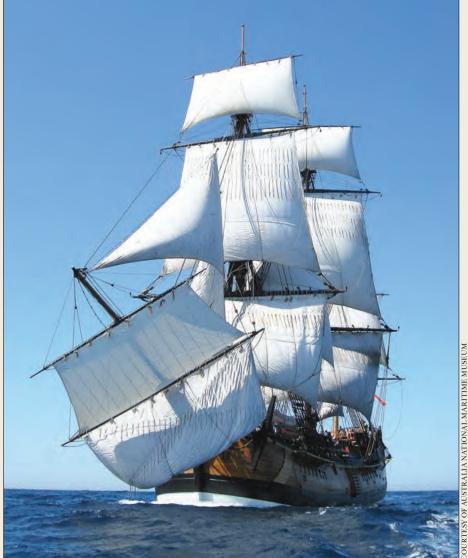
by Tom Jackson

mong the incessant onslaught of information from every direction at almost every hour of every day, it is sometimes astonishing and certainly refreshing—like a bell in the fog—that the distant past can still make headlines. Watercraft play sophisticated roles in many of these reports, often showing, as William Faulkner famously observed, that "The past is never dead. It's not even past."

One example leapt out in April 2016, when a private, nonprofit organization called Rhode Island Marine Archaeology Project (RIMAP) announced that its investigators were closing in on the remains of Capt. James Cook's ENDEAVOUR, believed to have been scuttled in Newport Harbor in 1778. Built as a Whitby collier named EARL OF PEM-BROKE in 1764, she was repurposed and renamed for the famous explorer's first circumnavigation of 1769-71, then later repurposed again, renamed LORD SANDWICH, and sent to America. The RIMAP report was unusual for being put forward before having a confirmed identification. The news cycle's craving for drama being what it is, some facts were, you might say, exaggerated. Persnickety and complex nuances were skipped. For the record: Thirteen British ships are known to have been scuttled in Newport's harbor during the Revolutionary War, and ex-ENDEAVOUR is believed to be

one of them. RIMAP has surveyed nine of the thirteen. A January 2016 analysis of documentary evidence undertaken by the institution, and funded by an Australian grant, showed that Cook's ship is one of five of these ships sunk in one specific area. RIMAP previously mapped four of those wrecks, so it's possible that ENDEAVOUR's bones have already been surveyed. A fifth potential wreck site in the area, which also could be the famous ship, is targeted for a 2016 mapping. Meanwhile, RIMAP (rimap.org) is trying to raise money for a shoreside facility to house artifacts and undertake detailed studies—which a person might suspect played a role in the announcement's timing.

To anyone with Pacific Coast connections or an interest in exploration, Cook's story is a powerful one. He chose ships wisely and managed them well, with loss of life among his crews unbelievably low compared to the dismal record of his predecessors. He was aware of first-contact harm to native



The reconstruction of Capt. James Cook's exploration ship ENDEAVOUR, launched in 1993, represents how the original ship would have looked during her 1769–71 circumnavigation. Archaeologists have concluded the original ship is one of five hull remains being studied off Newport, Rhode Island.

Pacific populations and at least tried—with meager success—to minimize it. He set the bar for later British ventures, for example, the 1845 Franklin Expedition, whose lost ship EREBUS was itself found at last in Canadian Arctic waters in 2015. Cook is revered as the first circumnavigator of Australia. The reproduction of ENDEAVOUR homeported at the Australia National Maritime Museum in Sydney in honor of his legacy is one of the best ship reconstruction projects ever done, demonstrating that living ships capture the general public's imagination in ways that excavated partial remains, unfortunately, cannot (see WB No. 152).

An even more dramatic find, dating to the very dawn of Europe's Age of Discovery, is ESMERALDA, one of Vasco da Gama's fleet of 1502–03. She was found off the coast of Oman in 1998 by Bluewater Recoveries Ltd. With the cooperation of the Omani government, she was excavated in 2013–15 and the positive identification revealed in March 2016. She

was one of two ships lost in a storm in May 1503 during da Gama's second voyage to India. Her artifacts include the earliest known example of a ship's bell, an unusual navigational instrument, and coins minted for the India trade. Not much is known about this type of ship, so close study of hull remains should be revealing. The Portuguese rounding of the Cape of Good Hope is one of the great epics of European exploration and ocean navigation—a feat finally accomplished by daring to sail far offshore to the west of Africa first, and only then turn south and then east to round the cape. Unfortunately, the history also became one of extraordinary greed and brutality. Da Gama was the first to reach India, in 1498, and he immediately started attacking Arab ships, disrupting long-established spice trade routes, forging lucrative monopolies, and opening a pattern of European colonization that had consequences that are still "not even past."

One of my favorite recent headlines came in March 2016 with the stunning discovery, informed by Sarah Parcak's analysis of satellite imagery, of a Viking-era site in southern Newfoundland, hundreds of miles away from the famous northern settlement uncovered in the 1960s at L'Anse aux Meadows. Examination of imagery for anomalies in plant growth patterns pointed to likely places to dig. An excavation team went right to it, far south at Point Rosee, and quickly found evidence of bog iron smelting, probably for materials for boat repair. Meanwhile, like Australia's ENDEAVOUR, the Norwegian reproduction Viking ship DRAGON HARALD FAIRHAIR is proving the value of retracing voyages this year: She left Haugesund on April 26 and was in Reykjavik by May 10—and that's after stopovers in both the Shetland and Faroe islands.

Satellite imagery is one example of technological changes, improvements, and adaptations for archaeological aims. We'll see more headlines involving such innovations. At Stanford University, for example, scientists have developed a robotic diver, OceanOne, and tested it by recovering a fragile vase in April 2016 from a 17th-century French wreck at a depth of 100 meters (328'). The device, which combines artificial intelligence with stereoscopic vision and feedback sensors from mechanical hands, allows an operator in a surface vessel to see and "feel" objects that the robot touches. Now there's a virtual reality device to lust after.

Other branches of science, too, are uncovering the likely role of boats in history. A fine recent example is last year's long-awaited compilation of findings about the 9,000-year-old skeletal remains of "Kennewick man," found years ago well inland in Washington state. Astonishingly, analysis showed that 70 percent of his diet consisted of seafood and marine mammals, and his primary water source was glacial runoff. Coupled with finds of a sea-dependent native culture dating back more than 12,000 years on California's Channel Islands, accessible only by boat, this evidence implies at least one branch of immigration from Asia along what one scientist has taken to calling the "kelp highway"—by boat, independent of any theoretical land bridge opened by receding glaciers.

Genetics, too, promises to pinpoint the "who" and "where" of human migrations, and the "how" in cases such as the Channel Islands will rule out everything except boats.

All of this news has emerged within the past year alone. The science of nautical archaeology is accelerating, diversifying, and spreading rapidly. For a maritime historian, there has never been a more exciting time to be reading the headlines.

Tom Jackson is WoodenBoat's senior editor

The Ride of a Lifetime

by Dr. Tomas Mijares

Summer in Detroit, Michigan, means Tigers baseball, fireworks at the Freedom Festival, and Gold Cup hydroplane races on the Detroit River. As long as I can remember, I wanted to drive an inboard hydroplane with the hope of ultimately driving one of the big boats. Watching my neighbor, Harold Weber, design and build 16' boats for the 2.5-liter class only whetted my appetite.

Early in my career as a Detroit police officer, I purchased a very used 5-liter hydroplane and an equally used 302-cu-in Ford engine. Work limited my time for pursuing any form of hobby, and coupled with graduate school, soccer coaching, teaching Sunday school, and raising four daughters with my wife, also a police officer, the boat never saw the water. After I retired, a second career as a university professor in central Texas put me far from racing opportunities.

Then, I learned that Harold's grandson, Mark, a driver on the unlimited hydroplane circuit, was conducting classes in a new program called, "The Ride of a Lifetime," which the American Power Boat Association developed to generate interest in hydroplane racing. I couldn't resist the chance to finally get behind the wheel of an inboard hydroplane.

The class met on a Friday evening in a pool at Wright State



Dr. Tomas Mijares fulfilled a lifetime ambition of exceeding 100 mph in a hydroplane, thanks to a driving program established in Ohio by the American Power Boat Association. *Inset*—The steering wheel had to be removed to allow driver access, but during training the driver had to remove the wheel himself and escape from a mockup while upside down 15' deep in a pool. Safety and shoreside help were heavily emphasized.

University in Dayton, Ohio. After thorough briefings on safety—which was emphasized throughout the weekend each student took a turn in a floating capsule, similar to an F-16 cockpit but with a removable steering wheel instead of a joystick. When the capsule was pushed to a depth of 15' and tipped over, the student was required to remove the steering wheel, disengage the five-point safety harness, and exit the cockpit while inverted. The correct procedure is to surface at the nose of the boat, where rescue divers enter the water. During an actual crash, when seconds are critical, all procedures have to be followed in the required sequence.

In addition to safety, a Saturday class covered boat operation, course regulations, and crash procedures. Student drivers were fitted for Nomex driving suits, helmets with built-in flotation and radios, and crash vests equipped with flotation and Kevlar pads over the ribs, kidneys, and thighs.

After lunch, we got our first look at our boat, a 19' cabover hydroplane built by Jon Staudacher of Kawkawlin, Michigan, in 1981. Its 305-cu-in Chevrolet engine generated 275 hp and turned a 12 × 21 three-bladed propeller at 6,500 rpm. Built of a plywood frame on Sitka-spruce stringers and planked with plywood, the hull is reinforced with fiberglass cloth set in polyester resin. The engine cowling is entirely fiberglass. The rudder, strut, and shaft are custom-fabricated from aluminum. The engine was built by Marollo Racing Engines with a Holley single-barrel carburetor and runs on regular gasoline. The hull and engine are maintained by Tom Newman of Columbus, Ohio.

Although the attraction of such a boat is speed, the entire package of hull, engine, and hardware is built to enhance reliability, durability, and safety. Because this boat was expected to do 150 laps during the weekend, an oil cooler and an alternator had been added. The fuel tank carried approximately 11 gallons. The same boat in racing trim would weigh considerably less but would require longer pit stops and occasionally even an entire engine change. The added weight deducted approximately 10 to 15 mph from the boat's top speed but increased range and reduced maintenance between runs.

Eventually it was my turn. Although I had seen other drivers starting the boat, the roar of the engine directly behind me was startling. The propeller shaft is in direct drive, so when the ignition catches, the boat is immediately moving. The driver is in continuous radio contact with a dockside instructor. Certified emergency medical technicians with two ambulances are present at all times in the pit area. Two crash boats with scuba-equipped rescue divers are stationed at each end of the oval course. As instructed, I took the first lap at 45 mph to become familiar with the boat's handling characteristics and get familiar with the course, followed by two more laps at about 80 mph to build confidence. On the straightaways for the rest of the allotted ten laps I reached about 105 to 110 mph. At that speed, gentle ripples on the surface felt as hard as concrete. The hull rises until only the after tips of the sponsons and the propeller are making contact with the water. The natural tendency is to slow down when entering a tight turn to port to avoid spinning out, but the skid fin attached to the port sponson and the offset hull design keep the boat stable. With each lap, a driver learns to corner more aggressively.

After the tenth lap, it was time to decelerate and turn gently off the course after finishing the fourth and last turn—but maintain enough speed to avoid "nosing in" and to assure sufficient flow of cooling water through the intake. As instructed, I cut power about 40' from the dock

and drifted in. I must have had an ear-to-ear grin on my face, but it was blocked by the helmet's face shield and air mask.

This sort of boating is not for the faint of heart. The Ride of a Lifetime will surpass the expectations of even the most addicted of adrenaline junkies.

Shortly after earning his PhD in higher and continuing education from the University of Michigan, Dr. Tomas C. Mijares retired from the Detroit Police Department as a sergeant after a 20-year career. In 1990, he joined the faculty in the School of Criminal Justice at Texas State University, where he has been a full professor since 2003.

Around the yards

■ At Six River Marine in North Yarmouth, Maine, a 46′ carvel-planked motoryacht launched in Vancouver, British Columbia, in 1932 is nearing the completion of a **restoration** that began in October 2015. In researching the origins of the KATIE MACK, owner Hugh Harwood found that she was built by brothers John D. and William L. McGregor. Thought to have been built to an Edwin Monk Sr. design, Harwood thinks she actually may have been an interpretation of a Ted Geary design by the brothers, one of whom was an engineer and the other a machinist. The bridgedeck cruiser is 46' LOA, with a beam of 11'2", and a draft of 4'. Harwood and his wife, Pam, bought the boat in Tacoma, Washington, and had her trucked to Maine; they intend to live aboard in retirement, spending summers in Maine waters and winters in the Bahamas. The project involves extensive hull structural work, including new transom framing, horn timber, stem, floor timbers, and steam-bent frames, all of white oak. A few original floors were retained in way of the engine, Scott Conrad writes from the yard. The Detroit 6-71 diesel is being retained, and it remained in place during the hull work. Douglas-fir is being used for a new section of keel and skeg aft. Originally planked with western red cedar, she is being replanked using Alaska yellow cedar. She'll have a new propeller shaft, stainless-steel rudder, bronze skeg shoe, and bronze struts. She'll retain her original outboard profile, decks, teak trunk cabin and deckhouse, but will have new teak rubrails and toerails. Most of her original interior trim will be saved, although new



The 46' bridge-deck cruiser KATIE MACK, built in Vancouver, British Columbia, in 1932, is being extensively restored at Six River Marine in North Yarmouth, Maine.

CURRENTS

cabin soles of iroko are being installed. She'll have her wiring and plumbing systems rejuvenated, plus a new woodstove with a soapstone hearth and a reconditioned propane galley stove. A **summer relaunching** is expected.

Six River Marine, 160 Royal Rd., North Yarmouth, ME 04097; 207–846–6675; www.sixrivermarine.com.

■ "British boatbuilder Ashley Butler has bounced back from a series of misfortunes and set up a new yard near Falmouth, in Cornwall," Nic Compton writes from England. "During the past 17 years, Butler has built a string of boats inspired by traditional working craft, including a 32′ Bawley yacht which he built 'by eye' in Martha's Vineyard and sailed back singlehanded to the U.K. (see WB No. 189). His luck turned, however, when he lost his stake in Gweek Boatyard, and he sailed off to Spain to lick his wounds.

"Back in the U.K., he negotiated a deal to buy the Penpol Boatyard (his third!) in Restronguet Creek, just off the Carrick Roads. The yard was run by Brian Pope for the past 20 years and is well-placed for yachts visiting Falmouth or passing through the English Channel, though access is strictly tidal. Facilities include berths for up to 30 boats, onshore storage for 25 boats and a crane capable of lifting up to 14 tons. The two main sheds are $80' \times 50'$ and $30' \times 60'$, with a further 80' paint shed tacked on the side.

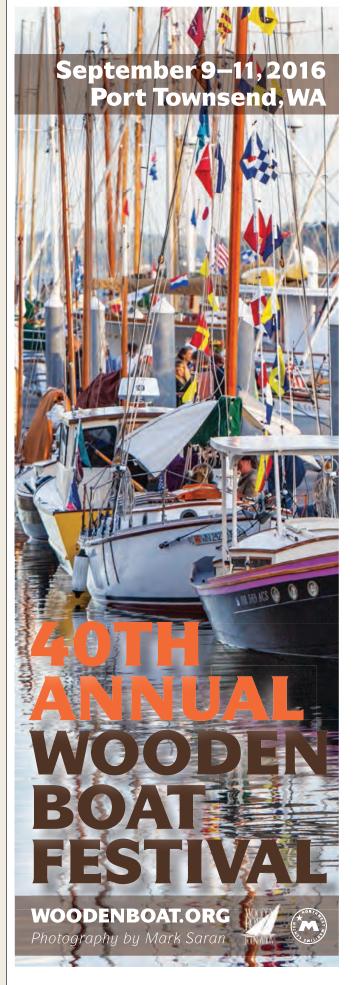
"Reborn as **Butler & Co.**, the yard will specialize in the usual mix of **traditional boat restorations**, **repairs**, and **new builds** that has earned Butler a place at the forefront of the British wooden boat scene. When I visited the yard in mid-April, there were several interesting projects in progress, including completely rebuilding the **1880s Itchen ferry SHELTIE**; fitting a new iroko keel to the **1938 Fred Shepherd yawl AMOKURA**; and refurbishing the **62' lugger VERACITY** (built in 2004 by Marcus Rowden of lugger GRAYHOUND fame; see WB No. 240). Summer projects included laying the keel for a new Mayflower 40 yacht designed by Butler (a



refurbishment at the new Butler & Co. yard in England. *Inset*—Ashley Butler uses half models

to design boats, in this case his Skye-class

daysailer.





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CURRENTS

smaller version of the 50-footers he built for himself and a client) and restoring the 30^\prime wooden launch that artist Percy Thurburn used to paint the Brixham trawlers back in the 1920s and '30s.

"Butler was also putting the finishing touches to his latest design: a 20' to 24' dayboat inspired by Falmouth quay punts that will nicely fill the gap between his Lily class clinker dinghies and the bigger Mayflower range. Judging by the half model he proudly showed me, the new Skye class will be as sweet as a nut."

Butler & Co. Traditional Wooden Boats, Old Mill Boatyard, Old Mill Creek, Dartmouth, Devon, TQ6 OHN, U.K.; www.butlers-wooden-boats.co.uk.

• "In keeping with their reputation as a nation that can overcome all obstacles, Vietnam is rebuilding its aging fishing fleet," writes Alan Haig-Brown of British Columbia, whose work often takes him to Asia. "For example, Capt. Trinh Van Hung, who grew up in a fishing family and returned to the business at age 25, currently owns two 23m \times 5.5m boats (about 75'6" \times 16'6") and had a **third boat** constructed under a government program to increase the fleet. His brother-in-law, Nguyen Van Tuyen, who owns the Tuyen Phong Shipyard in the village of Hòalôc, of Hâulôc Thanhôa Province, is finishing the 26m x 6.2m (about 85' × 20') wooden boat, powered by a Cummins KTA 19M4 700hp engine, which is intended for the drift-net tuna fishery. In Southeast Asia, converted, secondhand generator engines power many fishing boats, but in order to qualify for the loan program new boats are required to have a new, purpose-built marine engines, and this one will turn a 1.9m-propeller through a 6:1 reduction gear.

"The tradition of wooden boat building is still strong in Vietnam, although quality wood is becoming harder to obtain. For frames and planks, the shipyard imports logs from Laos and saws them on-site with their own bandsaw mill.

"As it is the world over, launch day deserves some ceremony, and the village of Hòalôc does it well. Performers sang in front of a large poster celebrating the shipyard and the building program as the pragmatically named TH9388TS took to the water. Near the launching slip, a sistership was fully framed with massive timbers bolted and solid. Nguyen Duc Cuong, a representative of the Fishery Department under the Department of Agriculture and Rural Development of Thanhhoa Province, explained that the province had an allocation of 65 new boats, of which 16 had been approved and six had already been completed. With security of the fishing fleets a major concern, he added that the Vietnamese government was developing a new communications system to link all the boats."



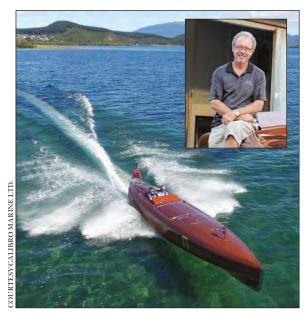
An 85' tuna-fishing boat launched in late 2015 is part of a growing fleet supported by a loan program in Vietnam.

CURRENTS

■ In New Zealand, Harry Nordberg of Calibro Marine Ltd., based in Whangamata on the North Island, has completed the construction of BABY THUNDER, a reproduction of the George Crouch Gold Cup boat BABY BOOT-LEGGER of 1924, 29'10" LOA, for a Wellington client. Nordberg, who has made a specialty of building such classic raceboat designs with modern construction methods and with an eye toward an international clientele, first worked up the design on his computer. The CAD files allowed computer-controlled cutting of structural parts, including plywood bulkheads, ring frames, and floor timbers to be set up on the keel. After the numerous stringers and chine logs were installed, the topsides and deck were planked with okoume plywood set diagonally and epoxy-glued to the structure. The generously rounded topsides and deck were done this way first as far down as the chine logs, then the boat was turned over. The bottom was plywood-sheathed as well, also with okoume plywood. Next, mahogany strip planking was vacuum-bagged in place over the faired plywood bottom. This wood-composite bottom was stained, sheathed in fiberglass cloth set in epoxy, and finished with 12 coats of varnish. Returned upright, the boat's deck was completed with hatches and deck openings, then mahogany planking was vacuumbagged to the topsides, the rounded-over sheer, and the deck, followed by more staining and 12 coats of varnish. After the interior was finished, the rudder, propeller, and strut were installed, followed by the 7.4-liter, 532-hp bigblock Chevrolet engine and the rest of her systems and hardware. In all, the project involved 2,200 hours of work, including building a custom trailer.

Another client, inspired by an article in WB No. 245, is reportedly considering having a Fairliner Torpedo built using the same methods.

Calibro Marine Ltd., 116 Waireka Pl., Whangamata 3620, New Zealand; 0064–21–765–093.



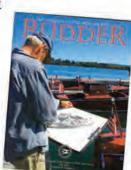
Harry Nordberg (inset) builds modern interpretations of classic racing powerboats—most recently BABY THUNDER to the lines of the George Crouch—designed BABY BOOTLEGGER of 1924. His Calibro Marine Ltd. is based in Whangamata, New Zealand.



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In Stdsbygd,
Norway, the
Museet Kystens
Arv (Coastal
Heritage
Museum), where
boatbuilders
focus on local
types, especially
lapstrake-built
Åfjordsbåts
(right), a
new building
(above) is under



construction for exhibits and a gallery of locally important boats. The gallery is expected to open in 2017 and the exhibitions in 2018.

Offcuts

■ Tora Heide, an old shipmate, writes from Norway with news of the expansion of the maritime museum where she is on staff:

"Museet Kystens Arv, or 'Coastal Heritage Museum,' is in Stadsbygd on the Norwegian west coast, across the fjord from Trondheim. Norway's long and rugged coast, combined with our fjords, mountains, and cold climate, meant that the sea, from the Stone Age and up to the mid-1900s, was both the national highway and a main source of food. With boats being so important for both transportation and fishing, we have a long and diverse maritime tradition.

"These boats have continuously been developed and adapted through the centuries. The most well-known stage would be the Viking ships, known for their speed and seaworthiness." Heide should know about such things, as a veteran crew member of the Viking ship reconstructions DRAGON HARALD FAIRHAIR (mentioned above), which is currently sailing U.S. waters, and HAVHINGSTEN FRA GLENDAL-OUGH, which voyaged from Denmark to Ireland and back. Her parents were both teachers at the Fosen Folkhøgskole, a folk high school not far from Stadsbygd that includes boatbuilding and seamanship among its many courses preserving Norwegian traditions. "But," she continues, "times and demands changed, technology developed, material supplies changed, and so did the boats. Every region of Norway has its own particular type of boat, fit for their local conditions and for different use.



"Our **local boat is the Åfjordsbåt**, or Åfjords boat. It has a light, flexible construction, and a perfect combination of rowing and sailing traits. They come in sizes from about 15' to 60', all based on the same shape and construction. The main material used is spruce, but the frames are made from compass timber from the roots and branches of pine trees.

"Right now, the museum's grand, **new exhibition center** is finally **under construction**. This building will contain a large exhibition on the tradition, skill, and knowledge related to building and using clinker-built boats and especially our local traditional Åfjordsbåt. There will also be a **gallery**, **with rows of boats**, open to the public. This will allow us to finally present our collection of traditional central Norwegian boats, which at the moment are stowed away in barns around the village." The new 1,700-square-meter (about 18,300 sq ft) building's boat gallery is expected to open in 2017 and the exhibition hall the following year.

"At the museum, we have a **traditional boatyard** with two boatbuilders and one apprentice. The workshop produces and sells boats on demand and demonstrates the craftsmanship of boatbuilding to our visitors. But more important, by having apprentices we keep the knowledge and tradition alive, always to be handed on to new generations. The art of boatbuilding cannot be learned to the fullest simply by reading a book, and therefore the skills need to be kept alive to be protected. Writing about it is just not enough. **Einar Borgfjord**, our **master boatbuilder**, learned from an old local boatbuilder, and so the knowledge and tradition have been handed down through an

unbroken chain of craftsmen, which we are still a part of today. And we are proud to be so."

Museet Kystens Arv, Myrssjøen 44, 7105 Stadsbygd, Norway; www.kystensarv.no.

■ The **Great Lakes School of Wooden Boat Building**, subject of John Summers's feature on page 90 of the *WoodenBoat* issue you hold in your hands, played a role in a significant project at the **Michigan Maritime Museum**. "After a year and a half of



The 1939 fish tug EVELYN S. has undergone preservation at the Michigan Maritime Museum in South Haven, with the work done by the Great Lakes Boat Building School (see page 90). The historic boat's setting has also been upgraded.



dedicated effort," a note from museum board member Sandy Bryson states, "the museum announced in the fall of 2015 that the **preservation of EVELYN S.**, a **1939 fish tug**, had been completed through the good work of apprentices from the GLBBS and local contractors." An initial marine survey was conducted by Pat Mahon, director and lead instructor at the school, and much of the tug's deteriorated deckhouse was rebuilt by student Hans Wagner. The boat was also repainted and is now exhibited in a newly landscaped section of the museum's campus. A "technology station" was also added to show a video that features the history of commercial fishing in South Haven, the process of moving and preserving the tug, and some inside footage of its pilothouse, Kalenberg engine, and net lifter equipment. The video can be viewed at www.youtube.com/watch?v=VqIoqrG4u9Q.

Michigan Maritime Museum, 260 Dyckman Ave., South Haven, MI 49090; 269-637-8078; MichiganMaritimeMuseum.org. Great Lakes Boat Building School, 485 South Meridian Rd., Cedarville, MI 49719; 906-484-1081; GLBBS.org.

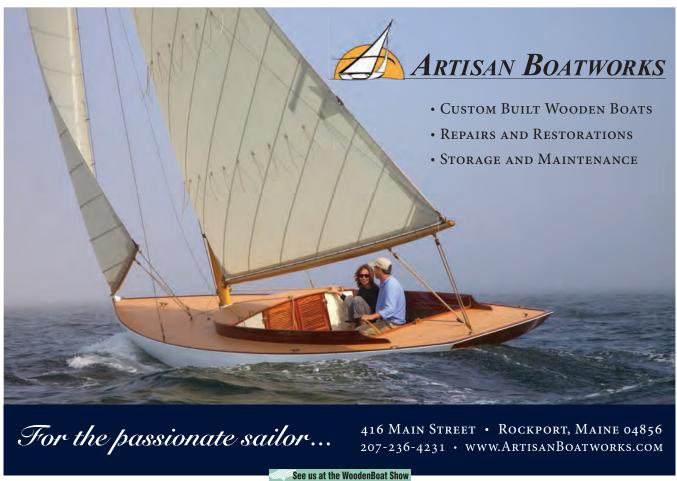
- David Shaw from somewhere in the digital ether mentioned a while ago that he has started WikiSea, a Wikipediastyle website devoted to boating subjects. "Experienced people," he writes, "are invited to contribute their expertise to writing topics in more than 2,000 categories covering design, operations, passages, associations, publication profiles, suppliers, and much more." See www.wikisea.net.
- Susanne Altenburger of Phil Bolger & Friends called recently to let us know that the June 2016 issue of the

magazine Messing About In Boats will carry its 500th column called "Phil Bolger & Friends On Design." Bolger started writing for the magazine to carry on work he started earlier, sketching boats in response to readers' ideas for the old Small Boat Journal. Altenburger, who collaborated with Bolger on the column for many years, has been carrying on solo since Bolger's death in 2009. A tip of the hat and raise of the pint to both the design office and the magazine, if you please.

Phil Bolger & Friends, 66 Atlantic St., Gloucester, MA 01930; 978-282-1349. Messing About In Boats, www.messingabout inboats.com.

■ "Around San Diego, most car nuts dream of finding that classic car in perfect shape hidden away in some barn," Ned McMahon writes from Southern California. "I have never been interested in cars too much, but as a surfer and sailor, I can say I just found my barn-find catamaran.

"Most surfers know of Woody Brown's pioneering development of surfboards but less about his catamarans," he writes, speaking of multihull sailing pioneer Woodridge Brown (see WB No. 202). "During World War II, Woody often rode the fast double-hull canoes sailed daily by the locals at Christmas Island. When he returned to Hawaii, he took the double-hull idea and modified it with his experience building sailplanes to produce the first lightweight and very fast modern catamaran. That was 1947, and Woody named her MANU KAI, Hawaiian for 'sea bird.' He moved on to focus on his sailing business, but during the few years that he and his partners built boats he developed two stock catamaran models—Manu Kai 40 and Manu Kai 20—but the catamaran hadn't caught



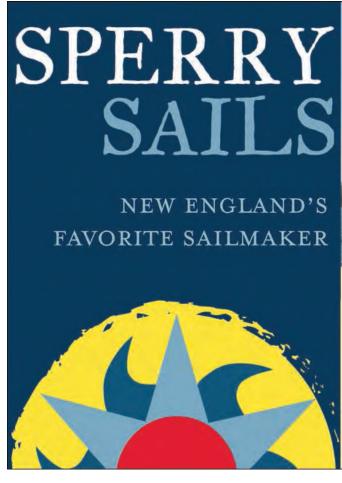
on the way it would a decade later with the Hobie cats, so not many boats were built to Woody's designs.

"One customer, though, was businessman and philanthropist Emile Fischer of Wisconsin, who took a ride on Woody's cat while visiting Hawaii in 1955. He ordered a Manu Kai 20, which was shipped to his home in Green Bay. Fischer sailed her every summer until a few years ago; when he died in 2014, the family donated the boat to Rawhide Boys Ranch, a program for troubled boys. When the ranch put it up for sale in 2015, I bid on the boat, sight unseen. I soon found myself the owner of a 59-year-old catamaran. Hoping it was at least salvageable, I drove 2,450 miles from my shop in San Diego to pick it up, supplementing my flip-flops and aloha shirt with a flannel shirt and boat shoes, and arrived to find freezing temperatures and pouring rain in Wisconsin. Thirty-six hours later, I rolled





bought, sight unseen, a 20' Woody Brown catamaran from a school in Wisconsin and towed it home to San Diego. The boat was ordered in 1955, and after the owner died it was donated to the school. McMahon reports his "barn find" in nearly perfect condition.





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back into San Diego. I survived, the car made it, and most of all, the cat survived too.

"The next day, I dragged her into my little shop and finally had a good look at her. She wasn't missing a single part and was in **remarkably good condition**. There were a few spots that needed repair, mainly along the bottoms of the hulls, and she needed some new paint. That's about it. The very helpful people at Rawhide also gave me a file, which I tossed in the car and didn't even look at until I was back home. When I opened it, I discovered the original correspondence between Woody and Fischer, the original brochure, even the Matson waybills.

"The last thing I looked at was the sail, which I was stunned to find in good shape, down to the bright red Manu Kai frigate bird logo. The little cat never had a name, but I thought that in honor of Woody and all the beach boys that sailed off the beach in Waikiki all those years ago, I would name my new little cat MANU'IKI—meaning LITTLE BIRD."

Across the bar

■ Peter Stanford, 89, March 24, 2016, Croton-on-Hudson, New York. Mr. Stanford left his career in market research to found the South Street Seaport Museum in 1967 in the area of the former Fulton Fish Market in lower Manhattan. He and his wife, Norma, who survives him, had been inspired by a visit to San Francisco, where they saw historical ships at the San Francisco Maritime Museum, later forming the collections of the National Park Service's San Francisco National

Maritime Historical Park. Having founded Friends of South Street together in 1966 to prevent the destruction of the historic neighborhood, especially the buildings of Schermerhorn Row, the couple became convinced that an exhibit of historic ships could be a centerpiece of New York City history. Mr. Stanford, an avid sailor from a young age, graduated from Harvard University with a degree in history and King's College, Cambridge, with a master's degree in English literature. He served as a U.S. Navy radioman during World War II. In South Street Seaport Museum's early days, Mr. Stanford amassed a fleet of historic ships, among them the steel-hulled square-riggers PEKING and WAVERTREE, the tugboat W.O. DECKER, the schooner LETTIE G. HOWARD, and the lightship AMBROSE. He was instrumental in organizing a highly influential parade of "tall ships" in New York Harbor during the 1976 United States bicentennial celebrations and a similar event marking the centennial of the Statue of Liberty in 1986. He was replaced as the museum's director in 1976, after which the museum formed closer alliances with commercial development, of which he was critical. He went on to lead the National Maritime Historical Society and found the Council of American Maritime Museums, the American Ship Trust, the Hudson River Maritime Museum, and the National Maritime Alliance. Along the way, he had a hand in saving numerous historic ships. In recent yearsespecially after the World Trade Center attack in 2001, the financial panic of 2008, and damage by Hurricane Sandy in 2012—the South Street Seaport Museum vision seemed to be unraveling, and there was even an effort to return PEKING to Germany, where she was built. But the institution seemed



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to regain stability after a management upheaval passed in 2011; this year, it received a \$4.8 million grant from the Lower Manhattan Development Commission and mounted its first new exhibit since the hurricane. Through all of its changes, Mr. Stanford remained passionately committed to the museum. He founded Save Our Seaport in 2011, an advocacy organization that had a significant number of former museum staff as members and urged a return to its original principles, opposed what it viewed as excessive commercial development in the area, and continued to promote historic preservation.

■ Richard Cory Kugler, 85, March 28, 2016, Westport, Massachusetts. From 1967 to 1988, Mr. Kugler served as the director of the New Bedford Whaling Museum. During his tenure there, he led exhibitions about Fairhaven maritime painter and explorer William Bradford, about whom Mr. Kugler published one of his books, and about the 54th Regiment Massachusetts Volunteer Infantry, which recruited African-American soldiers from the North, many of them from New Bedford, to fight in the Civil War. Mr. Kugler graduated from high school in Winchester, north of Boston, and went on to study history and American studies at Amherst College and Harvard University. After military service in Europe during the mid-1950s (and a trip from Italy to Pakistan by motorcycle and on to India by boat), he taught history at Johns Hopkins University and worked as a historian at the U.S. Department of Defense. His published works included New Bedford and Old Dartmouth: A Portrait of a Region's Past and William Bradford: Sailing Ships & Arctic Seas, as well as numerous articles.

- Francesco Del Carlo, 88, December 10, 2015, Viareggio, Italy. The son of a boatbuilder, Mr. Del Carlo became a shipwright himself and went to work for yacht-builder Codecasa Shipyards, where he became foreman. In 1963, he opened his own boatyard on Via Pescatori in Viareggio, starting off by building wooden-hulled fishing boats of up to about 65' long. As the demand for fishing boats waned, he turned to what was by then a growing business in the Mediterranean: classic yacht restoration. One of the yard's first large yacht projects, starting in 1986, was the two-year reconstruction of the Codecasa schooner ANNIVENTI of 1925. Among numerous notable projects, Mr. Del Carlo's favorite was said to be the restoration of EILEAN, a 1936 Fife composite-built ketch with a 51' waterline length, owned by watchmaker and classic-yacht-race sponsor Panerai. Until his death, Mr. Del Carlo continued to work at the yard, which carries on under his sons Guido and Marco.
- Fred Farley, 72, April 15, 2016, Milton, Kentucky. A native of Seattle, Washington, where unlimited hydroplane racing was a wildly popular sport during his youth, Mr. Farley became a devoted fan at an early age. At 21, he began writing about races for *Boat Racing and Industry News*. During his career, he wrote more than 700 articles and five books about hydroplane racing and became the official historian for the Unlimited Racing Commission. He moved to Milton in 1999, on the Kentucky side of the Ohio River opposite Madison, Indiana, another important center of hydroplane racing.



25th Annual WoodenBoat Show **Exhibitor List**

(As of May 9, 2016)

Airchairs

Yacht ALIZEE

American Schooner Association

Antique Tools and More

Arey's Pond Boat Yard

Artisan Boatworks

Avesta & Co.

Bad Dog Tools

Beetle Boat Shop

Benford Design Group

Berkshire Boat Building School

Bete Fleming

The Beveled Edge

Brewer Banner Designs

Calli b.

Chase Small Craft

Chesapeake Light Craft

Classic Sailboat Shop

Colonial Knife

Concordia Company

Colby Davis of Boston

Connecticut River Books

Crushable Hats, Inc.

Custom Cordage, LLC

Day + Age

Devlin Designing Boat Builders

Dudley Dix Yacht Design

East End Foodies

Epifanes NA, Inc.

Yacht EURYNOME

Feifish

Flying Fish Printworks, LLC

Gannon & Benjamin Marine

Railway, Inc.

George Kirby Jr. Paint Co., Inc.

Grain Surfboards

Yacht GRAYLING

Great Cove Boats

Yacht HALF MOON TOO

Hamilton Marine

Hansen Marine Engineering

Hat Trick Embroidery

Heritage Marine Insurance

Herreshoff Designs and Yacht Sales

Herreshoff Marine Museum

Hewes & Company

HMS Enterprises, Inc.

Hoist Away Bags

Interlux Yacht Finishes

Iron Jenny, LLC

Island Jewelry

IYRS School of Technology &

Trades

J.J. Best Banc & Co.

Jamestown Distributors

The Jerky Hut

Yacht KITTIWAKE

The Landing School

Loughborough Marine Interests

(LMI), LLC & East Passage

Boatwrights

Lowell's Boat Shop

M. A. Cooper Design

Mack Boring & Parts Co. /

Yanmar

Maggie Lee Designs

Maine Island Trail Association

Maine's First Ship

MAS EPOXIES

Mahogany Heartthrobs

McMillen Yachts, Inc.

Yacht MERLYN

Monroe Boat Shop

MP&G

MW Coastal Goods

Mystic Knotwork

Nautical By Nature

Newport Nautical Timbers, Inc.

Parkerville Wood Products, Inc.

Pease Boat Works & Marine

Railway

Yacht PENN YAN

Pert Lowell Co., Inc.

Pettit Marine Paint

Points East Publishing

Power Home Remodeling Group

Prazi, USA

Pretty Funky Design

R&W Traditional Rigging and

Outfitting

RAPTOR Composite Fasteners

Redd's Pond Boatworks

Rocking the Boat

Rockport Marine

Ron Rantilla Rowing Systems

Ross Bros.

R.S. Pulsifer Co.

Yacht SALAR

Yacht SANTANA

Yacht SAPHAEDRA

Yacht SCARLET

Sea Bags

Yacht SEA CHANGE

Yacht SEA CHANTEY

Yacht SEA REBEL

Shelter Institute, Inc.

Small Boats Monthly

SoftPoint Industries, Inc.

Sound Marine Diesel, LLC

Snediker Yacht Restoration

Spruce

St. Angelo Hardwoods, Inc.

Stephen Sisk Photography

Stonington Boat Works, LLC

Strong Saluting Cannons

Sunglass World

Swanson Boat Company

Swing Lane Studio

T&L Tools

Tandy Leather Factory

Tidal Roots

Tiller Publishing

The Nantucket Bagg Co.

Thomas Townsend Custom Marine

Woodworking, LLC

Trinity Solar

Tumblehome Boatshop

Two Daughters Boatworks

U.S. Sportswear

Van Cort Gallery

Vertical Aeroponics and

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Viking Sales

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West System, Inc.

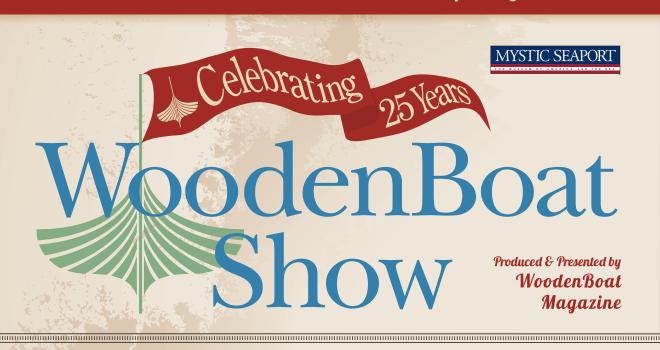
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Auto-Boats

The advent of the modern runabout

by Emmett V. Smith

In the July 1904 issue of *The Rudder* magazine, there's an amusing firsthand account by L.A. Dixon of the optimistic purchase of a very early gasoline-powered auto-boat somewhere on the coast of Maine. "Last March," writes Dixon, an experienced sailor who claims pure ignorance of powerboats, "the power boat fever struck me and it struck me bad, and nothing would help me any until I bought a gasoline launch." The writer visits a builder (whom he identifies only as "Mr. H.") and buys a 23', 4-hp launch, with the intent to run it home. "I asked the builder to come aboard and start the thing for us, as I did not know the vaporizer from the flywheel. I kept a stern line out while he started her and then after he had jumped ashore I cut

the line with my knife and started on the trip of 45 miles, with about 36 miles of it right out on the open ocean. As I passed out of hearing of the boatbuilder and his men I heard them singing 'Mr. Dooley', and that song, I think, I shall always remember."

Some boatbuilder! The tribulations of this pioneer can well be imagined. The piece captures well the enthusiasm and optimism for the union of the modern gasoline engine and the boat in 1903–04. The term "auto-boat" describes the resulting concept of light, powered launches—a new class of powered recreational boats driven by new technology and growing enthusiasm for the automobile. Though small recreational powerboats had existed for many years before 1904, the

Above—The introduction of the automotive element into powerboats produced a new type of watercraft. Automobile company Smith & Mabley, later Simplex, was among the first to enter the field and use the term "auto-boat," as shown in this display at the 1906 Madison Square Garden Importer's Salon.



VINGT-ET-UN, later called "the first auto-boat," is shown here in 1903 on the Harlem River, where she reportedly achieved a speed of 26 mph. The 770-lb, 21-hp boat was built for Smith & Mabley by rowingshell builder Tom Fearon to plans by Clinton Crane.

The term "auto-boat" obviously derives directly from the automobile, a new contraption in 1904 that was rapidly transforming western society. (Interestingly, the term "automobile," which simply means "self-moving," had been in use for decades to describe self-propelled torpedoes.) The novelty of a self-propelled carriage after centuries of horses as the primary engines of movement over the road is easy to understand, but its impact is hard to overstate. The automobile was so visible that the transfer of its technology and terminology to boats made many more people aware of powerboats; in fact, many of them didn't realize that small powerboats for pleasure had even existed before auto-boats, the automobile, and the gasoline engine itself.

The small power launches that preceded auto-boats occupied the same wilderness recreations as did many of the wonderful small

craft produced in the last decades of the 19th century. With displacement hulls powered by steam, electricity, or naphtha, they were slow and meditative, well suited for seeing the sights and socializing. Most had either fantail or torpedo sterns, and open cockpits lined with benches under a canopy top. In the pre-auto-boat era, companies such as Lozier and Matthews also made gasoline-powered boats of this configuration—which, with their relatively slow speeds and parlor-like layouts, were not auto-boats.

cultural revolution brought about by the automobile kick-started the powerboat industry we now know. The entry of the automotive element into the world of pleasure boating was fitful and controversial, but ultimately fruitful to the design of powerboats.

The icons of this new form of boat were the longdecked launches of the early 1910s, notable examples including the racing "Number Boats" (see WB No. 220). These are what we now mostly think of as auto-boats, as they so clearly show the automotive influence in design

and layout, with their engines forward, passenger compartments with built-in, forward-facing seats situated behind windshields, automotive steering wheels and controls, and often convertible tops. These sleek semi-displacement launches are some of the most efficient, smooth-riding, and comfortable boats ever made, and for that reason they still have a following today.

Before the auto-boat, small, powered pleasure boats were primarily designed with open cockpits ideal for socializing in large parties. These mostly displacement craft moved at low speed, which was ideal for conversation, sightseeing, and eating cake, as this party is doing in Palm Beach in 1905.





In 1904, the first year of the American Power Boat Association, a crowd inspects two racing auto-boats designed by Clinton Crane. VINGT-ET-UN II (right), driven by Proctor Smith, would win the second 1904 APBA Gold Cup while CHALLENGER (left) was the first American entry in the Harmsworth Trophy in England the same year. Though CHALLENGER showed superior speed at the start, ignition trouble caused her to fall behind.

One way to sum up the differences between autoboats and the launches that preceded them is this: The early power launch was about being somewhere; the autoboat was about going somewhere—and fast. In fact, the sport of organized powerboat racing coincided with the adaptation of "automotive" gasoline engines to boats. One of the first to be called an auto-boat and receive wide publicity as such was a light speed launch called VINGT-ET-UN, designed by Clinton Crane and built by rowing-shell builder Tom Fearon for Manhattanbased automobile importers Smith & Mabley. The name, which means "twenty-one" in French, reflected the power of the new 21-hp Simplex engine by which it was powered, as well as the builder's Continental connections and the fact that the French were a bit ahead in the development of both the automobile and the "auto-canot." As the product of an automobile company, it was natural that it be called an "auto boat." It weighed only 770 lbs, and in the fall of 1903, Smith & Mabley claimed a speed of 26 mph. Though it never actually raced, its 75-hp successor, VIGNT-ET-UN II, did, winning the second running of the Gold Cup in 1904 and several other races.

The Gold Cup is the major event of the American Power Boat Association (APBA), which was founded in 1904 essentially, if not explicitly, for the racing of

gasoline-fueled boats—although gasoline boats would not exceed the fastest speeds reached under steam power until the 1910s. Nevertheless, at the start there was some consternation about whether the newer types of boats would be permitted. In fact, for this reason, there were two Gold Cup races in 1904, because the establishment was initially prejudiced against the lighter and less seaworthy auto-boats. Therefore, boats of the "VINGT-ET-UN type" were barred from competition in the first Cup race, which was won by the 60'speed launch STANDARD. Poor competition in that race and the growing enthusiasm for auto-boats over the summer led to the second running in September, in which auto boats were allowed to compete. One of the victorious VINGT-ET-UN II's notable competitors in that race was William K. Vanderbilt, Jr.'s HARD BOILED EGG (so named because "it could not be beat"), a 40-footer powered by a 60-hp engine transplanted from one of Willie K's race cars.

It seems that a fundamental appeal of boating across all eras and cultures is the experience of self-directing—independently exploring the world and one's place in it. In late-19th-century America, the philosophy of transcendentalism and the dense and poisonous landscapes of industrial urbanization drove



people into nature and to boating, as they sought to find, in Ralph Waldo Emerson's words, "an original orientation to the universe." If the canoe and the early pleasure launch were products of transcendentalism, the auto-boat was one of modernism. The pursuit of freedom, luxury, and self-definition through new technology was in some ways an evolution of these ideals, and to some, a perversion.

W.P. Stephens, who chronicled the early years of American yachting, was a fellow canoeist and kindred spirit of Henry David Thoreau; he was as dismissive of the auto-boat as he was rhapsodic about the canoe. "[The auto-boat's] origin is due neither to the naval architect, the marine engineer nor the yachtsman" (neither, it might be pointed out, is that of the canoe) "but to the restless and ambitious builders and owners of automobiles, who, about 1900, transferred the lightest and most powerful of their new engines from their proper place in the car to an improvised setting in some sort of a launch hull."

The cultural tension between the makers and users of auto-boats and the long-standing tradition of yachting was palpable, and another reason why the press felt the need to give these new types of watercraft a distinctive name. In its first years, the auto-boat was simply a light hull designed for speed, fitted with an automotive gasoline engine. To the horror of the yachting world, generally very little science was used in the design and construction of their hulls. With some notable exceptions, the seamanship of those who were most captivated by auto-boats was often equally chancy. W.P. Stephens derided this new group of boaters as "automoboatists," declaring that "...as a class they are utterly ignorant of practical boating and yachting as well as the elemental principles of naval architecture." The yachting press declared the boats unseaworthy, a fair enough claim in many cases, but one that also revealed that the East Coast yachting establishment had a blind spot regarding the placid lakes, rivers, and streams of the nation's interior.

Unlike earlier pleasure boats, auto-boat cockpits were laid out like the passenger compartments of cars, with the driver in front, and forward-facing seats. This seems to suggest a shift in priorities, from socializing to speed.

Auto-boats resembled cars in their controls, dashboards, automotive steering wheels, and even foot pedals, as shown in this advertisement from the Albany Boat Company. This styling was to become a long-lasting design element of powerboats.

It was on these quiet waters that the auto-boat really took hold. All around the country, boatshops sprang up to produce auto-boats, and local shops that had produced other small craft began to build small motorboats as well. Particularly in the Midwest, boatbuilders such as Matthews and Truscott used the principles of standardization and mass-manufacturing to develop stock models. East Coast builders such as Elco and Gas Engine & Power Co. (so-named in 1885, with the word "Gas" referring to naphtha) who were already building stock boats also quickly moved to produce auto-boats. This was a marked change from the culture of yachting, where new boats were generally custom designed and built. It's no wonder naval architects were concerned: It seemed that they were destined to be left out of the present growth in boating as single designs were produced by the hundreds. Even worse, the innumerable small builders and backyard tinkerers who were fitting gasoline engines into all types of hulls were leading to more breakthroughs in powerboat hull design than were the naval architects. The same could be said for improvements to the gasoline engine itself.

Theory had not yet caught up to the principles of planing hulls, and while many of the best auto-boats were designed by naval architects, including Clinton Crane, Charles Mower, and Morris Whitaker, in some cases amateur practice was producing better ones. Accounts of the spectacular performance of unlikelylooking boats were mailed in to the boating publications from far-off places such as Wisconsin and Washington and dutifully published. The reporting of engine horsepower and speed was usually unverifiable. There was an excellent running spat, for example, in the pages of The Rudder from March through July 1904 between W. Albert Hickman, an unapologetic tinkerer who would later design the Hickman Sea-Sled, and naval architect Seth G. Malby about the merits of practice versus theory. It was sparked by an article Hickman wrote about his VIPER, at first glance a cracker-box of the worst





Opulent trade shows were an important part of the transformation of the recreational boating industry during the auto-boat era. Shown here is the Lozier display (though not auto boats) at the 1905 Boston Boat Show.

kind, but apparently fast. At one point Hickman, gleefully occupying his role as the uneducated inventor, states "I read Mr. Malby's article with great interest, but I had some difficulty in gathering its import, so I read it over to COCKAWEE's cook. He said: 'I think he's mad with himself because he knows why VIPER does things and you don't.' That is doubtless the explanation."

Though the optimal design parameters were still being sorted out, the arrival of the auto-boat marked a great expansion in recreational boating and the boating industry. The National Engine and Boat Manufacturers Association was founded in 1904—the same year as the APBA mentioned earlier and its first order of business was organizing elaborate trade shows for the sale of boats and their engines. It was a time when the technological enthusiasm of modernism was being culturally entrenched by consumerism, leading to the development of consumer gadgets of all kinds. Objects were being conflated with lifestyles through the power of advertising, and people were encouraged to define themselves and their level of success by their purchases. Expositions and trade shows of all kinds were fundamentally aspirational, and the makers of auto-boats drew on the visual language of Gilded Age yachting to sell their new class of watercraft as status symbols as well as amusements. The National Motor Boat Show very deliberately targeted new boaters, so much so that they had to display the boats in indoor pools to prove to the visitor that small boats would float safely.

The early auto-boats were chancy performers. Some managed to plane slightly while others did not. Some were exceptionally wet while others were reasonably dry. Some were cranky and others steered easily. Particularly when boats were designed for speed, it was hard to know how they would perform. Some of the first auto boats were torpedo-sterned, though most builders had switched to flat or V-transoms by 1910. Looking back, the principal difference between a successful boat and an unsuccessful one lay in the balance of weight, placement of the engine, amount of power, and shape of the hull. The famous DIXIE II, the most successful of the semi-displacement raceboats, owed its success in equal measures to Clinton Crane's design and to the remarkable Crane-Whitman V8—perhaps the first large engine to achieve 10 lbs per horsepower.

Mass-production in boatbuilding is often lamented, though builders such as canoe-manufacturer Henry Rushton seemed to retain a fairly high level of



Manitou



62 ft Sparkman & Stephens Yawl 1937

\$1.3M VAT unpaid Lying France

If JFK chose MANITOU for her good looks and speed – who are we to argue? Olin Stephens (Design No 99) drew her in 1936 from the same bloodline as DORADE and STORMY WEATHER for her first owner who wanted to win races - and she is at 62 ft a bigger boat than her sisters and offering more space and luxury below. Designed to sail well in both light airs and heavy weather; on the Mediterranean classic race circuit she has more than proven her capabilities in winning many regattas outright. The current owners have stopped at nothing in maintaining MANITOU to ensure she is probably as strong as she ever was and cosmetically immaculate.





52 ft Frank Paine Q Class Sloop 1930

\$550,000 Lying France

The Q boats; exemplars of the Universal Rule, amply revealed the pedigrees of their designers among the best of the period and were typically very well built – proving moreover to be fast, firm – and very beautiful. JOUR DE FÊTE (ex FALCON II ex HAYDAY) has been meticulously restored by John Anderson and others in the USA and in her current ownership has won many of Europe's classic events. Perhaps most importantly she has rewarded her crews with the exhilarating sailing for which the Q boats are rightly famed.

33 High Street, Poole BH15 1AB, England. Tel: + 44 (0)1202 330077



Racing auto-boats were difficult to handicap and often uncomfortable for daily use. This led the Thousand Islands Yacht Club to commission a one-design motorboat class in 1910, and the resulting "Number Boats" became some of the most successful and long-lived of the type. An example is shown at the far left in this frame.

craftsmanship despite it. I have often thought that true artistry requires a certain amount of ego on the part of the craftsperson, and standardization limits opportunities for this. Some of the younger companies in the 1900s were turning out auto-boats despite having precious little experience. In my former capacity as curator of the Antique Boat

Museum in Clayton, New York, I was sent last fall to examine, for possible donation, a 1915 auto-boat built by Lawley. Designed by a young Walter McInnis, it was the venerable Boston yacht-builder's attempt to enter the market for stock boats, and it debuted at the 1915 National Motorboat Show in New York. Its quality of construction over offerings of younger, inland builders was striking.

Around 1905–07, auto-boats began to resemble automobiles in *design* as well as power, partially because of the smaller and more reliable four-stroke-cycle engines—which could be placed under hatches and thus isolated from the passenger compartment. The layout, hardware, styling, and controls also increasingly mimicked those of cars. Spotlights, cushions, horns, and convertible tops became opportunities for extravagance. Indeed, this is the time when the form really came into its own, both in design and power.

Some of the most extravagant auto-boats were produced in this era. The Niagara Motorboat Company of Buffalo, for example, built some of the most elaborate auto-boats during the early teens. Two of these still exist, the larger one having foot pedals for forward and reverse, a brass spotlight controllable from the helm, deep cushioned bucket seats, and interior lighting. The engine is equally remarkable—a Fay & Bowen T-head with an aluminum crankcase and a beautiful brass oiler that could be monitored and accessed by the driver through a glass window in the mahogany dash panel. This engine is on loan to an equally remarkable 33′ torpedo-sterned, long-deck auto-boat, ANDANTE, built by Fay & Bowen in 1916. She is currently being restored at Tumblehome Boatshop in Warrensburg, New York.

The term "auto-boat" began to go out of fashion by the early 1920s, and was replaced by the word "runabout" for a fast pleasure boat with automotive power and styling. At about the same time, the hard-chined planing hull came to primacy, which necessitated a rearrangement of the cockpits. Where an auto-boat generally had a single cockpit with the engine forward, the runabouts of the 1920s had split-cockpit layouts with engines between them. The driver had to be farther forward in these bow-high planing hulls, and

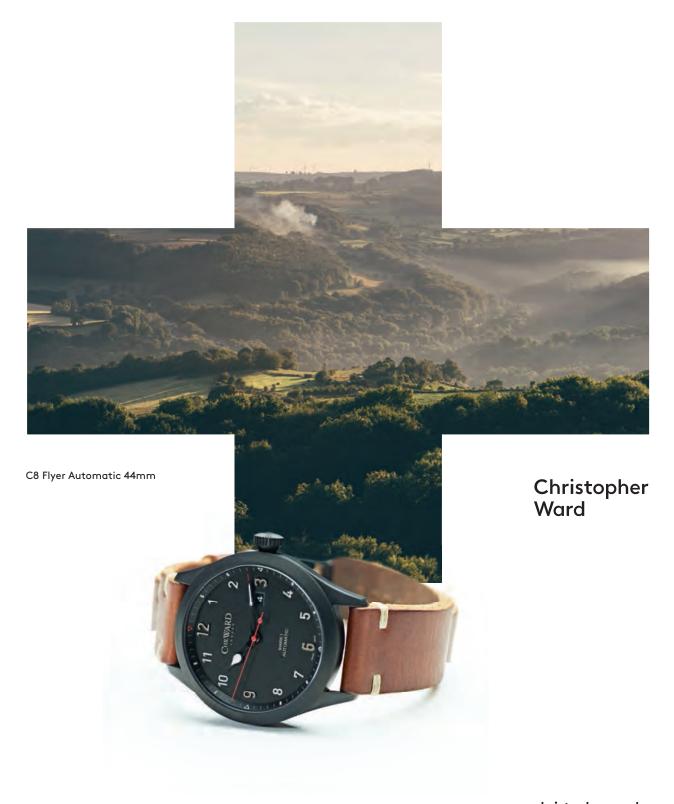


placing the engine farther aft allowed them to plane at lower speeds.

Though the name "auto-boat" is long gone, the trend it started continues. The small gasoline-powered boat still thrives, and is still influenced by automobiles in power, controls, and styling. The way the boats are manufactured, sold, and maintained has also continued to follow the automotive model. Racing has always played an important role in brand development, from Smith & Mabley to Chris-Craft, Gar Wood, Donzi, and Scarab. The on-again, off-again relationship with the science of naval architecture also continues, and these craft still provide an entrance into the world boating for many. With a few notable exceptions, the days of the slow pleasure launch, concerned mostly with comfort, viewing scenery, and socializing, are long behind us. There is, however, one modern class of boats that harks back to the lovely fantail launches of 1890. But you, dear WoodenBoat reader, are not going to like it, because even though its purpose is similar to that of the early launches, it contributes nothing to the lovely scenery in which it operates. It is, of course, the outboardpowered pontoon boat, which, to the extent that it can be called a boat at all, serves a very similar purpose to the very first pleasure launches.

The automobile's influence on the boating world has not always been positive, as the emphasis on speed and extravagance can obscure the more meditative and solemn rewards of boating. It is hard to see how the modern bow-rider helps a person find their "original orientation to the universe" through a connection with nature. Though they may share some of the blame for the more offensive modern powerboats, auto-boats don't share the same flaws. They are elegant and gentle, quick when asked but perfectly happy at low speeds. I am heartened by the enthusiasm exhibited by a few collectors and shops for the type. Some of the moments in which I personally have gotten closest to understanding Emerson have been in auto-boats.

Emmett Smith is the former curator of the Antique Boat Museum of Clayton, New York. He wrote about Charles Mower-designed Number boats, a one-design class of auto-boats, for WB No. 220.





WOODENBOAT SCHOOL

2016 SCHEDULE AT A GLANCE

MA`	Y	JUNE			JU	ILY			
22-28	/29-4	5-11	12-18	19-25	26-2	3-9	10-16	17-23	24-30
ALUMNI WORK WEEK	ALUMNI WORK WEEK	Fundamentals of Boatbuilding with Greg Rössel		Fundamentals of Boatbuilding Fi with Wade Smith		Fundamentals of Boatbuilding with Greg Rössel		Fundamentals of Boatbuilding with Warren Barker	
		Making Friends with Your Marine Diesel Engine with Jon Bardo	Build Your Own Annapolis Wherry with Geoff Kerr	Build Your Own Greenland Skin-on-Frame Kayak with Mark Kaufman	Introduction to Cold- Molded Construction with Mike Moros	Build Your Own Stitch-and-Glue Kayak with Eric Schade	Traditional Wood-and- Canvas Canoe Construction with Rollin Thurlow	Wooden Boat Restoration Methods with Walt Ansel	
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Wood-bodied Hand Planes

Two classic types for hull fairing

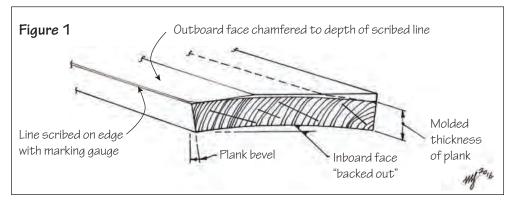
by Mark Jaquith

remember standing in the big open door of Malcolm Brewer's boatshop on Bay View Street in Camden, Maine, when I was a boy, watching the "old-timer," as my father called him. Long white cedar shavings curled out with every stroke of his hand plane along the shapely hull of a new Friendship sloop. I went back whenever I could. One day, finding the shop closed, I peered through a rain-spattered window and had an up-close look at two wooden-bodied hand planes lying side-by-side in a clean spot on the bench. I know now that one was a short "coffin"-shaped smoothing plane and the other, a longer one, was a razee. Both were placed on their sides to protect the honed edges of their blades, and the rag alongside explained their rich, glowing color and dull shine. Even at that age, I knew these tools were treasured in Malcolm's shop.



Above—Because comparatively small pieces of hardwood make excellent plane bodies, the author keeps a stash of them at hand. In the foreground are plane blanks of ebony, beech, and cocobolo. The smoothing plane in the background has a body made of rosewood, with its end-grain painted to discourage checking. Right—The planes shown here (and in Figures 2 and 3) belonged to Bernard McCausland, a shipwright at the Percy & Small Shipyard in Bath, Maine, which closed in 1920. The coffin smoother in front has a body of quebracho, a South American hardwood. The razee in back has a body of lignum vitae and a tote of applewood. Both have blades by the English toolmaker Moulson Bros., which was in business until 1912.

Figure 1—Planks such as those at the turn of the bilge that need to be hollowed out to fit tightly against the frames, and rounded over to be uniformly thick, can have most of their cross-sectional shape planed at the workbench before being hung on the boat, making the job easier than doing it all after the hull has been planked.



Traditionally, boatbuilders used hand planes with soles of tough tropical hardwood for density and durability. The soles were frequently made of self-lubricating lignum vitae, which allows the tool to glide swiftly across the work without any staining or streaking. Often made by a shipwright himself, such planes were balanced and proportioned ergonomically to the maker's own hand. Their soles were kept waxed and gleaming. Almost invariably, the planes had blades and chip breakers of Sheffield steel; I have seen the heads of steel common nails planed flush (inadvertently) by such a plane with its blade set very fine. When carefully sharpened and set, these tools are a joy to use, reminding me of nothing so much as shoveling light snow off a deck.

A coffin smoothing plane resembles a simple block of wood with a mortise allowing a blade to be set at a 45-degree angle and wedged into place. The body of the plane normally has curved sides but a uniform height. A plane of this type has no additional handle, since its body is high enough to grasp at the front and back. Razee planes get their name—derived from the French *raser*, meaning "to shave off"—from the naval practice of cutting down the upper works of warships to reduce the number of decks, especially aft, so as to better distribute their weight and armament. Compared to a carpenter's wooden plane, a razee appears "cut down" behind its blade, with a low-slung handle at the back.

The handle on the classic razee plane places the joiner's hand closer to the position and level of the cutting edge, allowing a concentration of force and better control. Of course, Len Bailey figured this out, and Stanley's Bailey-pattern planes followed the same approach for metal-bodied planes. Wooden-bodied planes nevertheless remained the favorites in boatshops and shipyards, at least in coastal New England, for many years. I've heard that builders avoided metal planes because they could leave marks that would show when topsides were finished bright, but I think that's just a convenient excuse. In reality, a plane that you've made yourself from a wooden blank that you've dried for a decade; that fits your own hand; and that you've used every day, year after year—that would be a hard habit to break.

Fairing a Hull

Outboard joiners traditionally faired hulls by using planes with soles shaped to fit their needs. Some have soles that are convex, others are hollowed to be concave, and some are even curved lengthwise, or rockered. These shapes accommodate hull flare, tumblehome, and even the sharp "tuck" typically found in the garboards or toward the stern. The workhorses of this "trade within a trade" are the coffin smoothing plane and the razee jack, or joiner.

Today, planes have largely been replaced by abrasives, usually in the form of sandpaper fixed to flexible wooden longboards. Both planing and sanding have the same objective—a fair hull—although planing may be trickier to learn. One advantage of planes is that they remove material more quickly, and they produce shavings instead of the very fine airborne dust produced by longboarding.

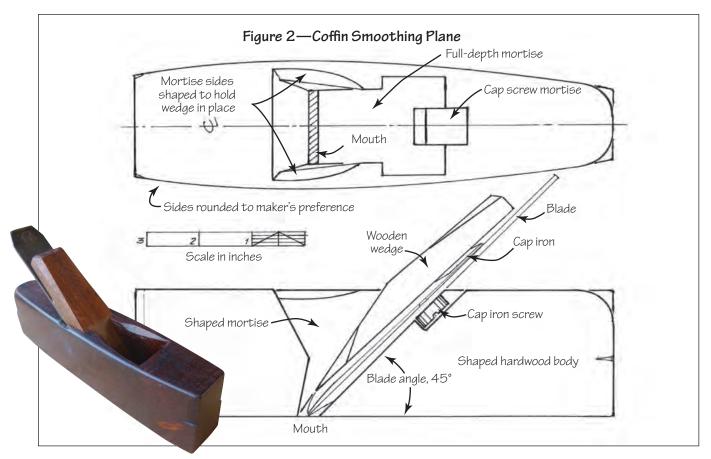
I learned some tricks for using coffin smoothing and razee planes for hull fairing from Connecticut boat-builder Seth Persson. In traditional plank-on-frame carvel construction, the inboard face of the planks has to be shaped to fit the curvature of the frames, which is convex everywhere except in the tuck. To "back out" the inboard face of a plank, an old smoothing plane that's been rounded off works well. After the inside face is hollowed out, you next set a marking gauge for the molded thickness of the planking and run it along both upper and lower edges to scribe the finished plank thickness.

Making Planes

Making a wood-bodied plane is an excellent opportunity to use a small offcut of fine hardwood such as live oak, which is still available in some areas but will need at least two years of seasoning before use. Maple is another good choice. Just about any dense hardwood can serve. A suitable piece of dense, fine-grained beech or dogwood can sometimes even turn up in a pile of seasoned firewood. For making a number of planes, a set of plane-maker's floats would help. Floats cut faster than files but smoother than rasps, and they are still available from a few commercial tool companies.

The width of a plane body is dependent on the width of the blade, so choosing the blade is the first job. The views presented on the following two pages of a smoothing plane (Figure 2) and a razee (Figure 3) can be adjusted to make them longer or shorter, but the top and side views are governed by the size of the mortise, which is closely fitted to the blade.

—MJ



This coffin smoothing plane was owned by Bernard McCausland and is fitted with a 2"-wide Moulson Bros. blade. The width of the blade determines the width of the mortise, which should be only slightly wider than the blade, in this case $2\frac{1}{32}$ ". The mortise must also be shaped to accommodate the cap iron, cap iron screw, and wedge. The exact dimensions of the body are up to the maker, who may want a narrower or wider blade for specific purposes. But the plane body must be substantial enough to support the blade and stand up to use. In this case, the body is $\frac{1}{4}$ " thick between the edge of the mouth and the side face. *Inset*—The author made this comparatively narrow coffin smoothing plane from a piece of logwood (also known as bloodwood) that a clam dredge brought up from a Chesapeake Bay wreck.

Using these guidelines, the outside face can also be shaped before the plank is hung. It is much easier to do this work at the bench instead of on the hull. First, a broad, flat chamfer is planed onto each edge (see Figure 1), stopping just short of the scribe line. Later, after the plank has been hung, the final planing takes place.

After the hull is fully planked, all of the planks show three flat facets for the length of their outboard faces where the hull exterior is convex. Fairing begins with the coffin smoothing plane pushed at a 45-degree angle across the seams both ways, wrapping each stroke across several planks as often as possible. This work, too, can proceed quickly, until you approach the depth of the scribe lines. With finer adjustments, this pattern is repeated until "splitting" the scribe lines for the full length of every plank.

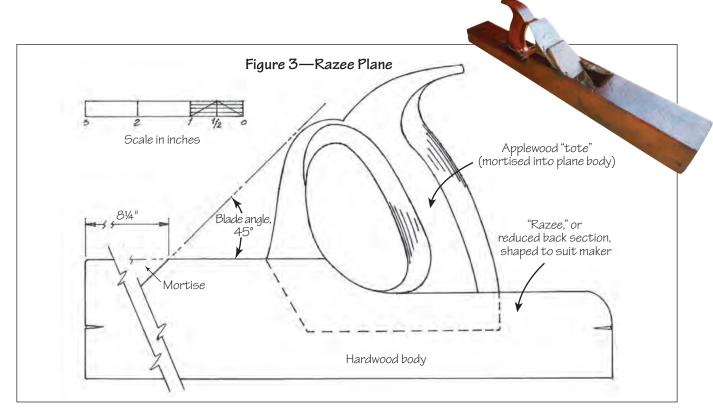
At this point, the hull is faired quite accurately to a measured thickness. All that remains is to set your razee fairly fine and begin to plane off the marks made by the smoothing plane using as long a stroke as possible. You can even "walk it along" if you have sure footing, but mind the end of the staging plank if you're on a scaffold. The remaining plane marks from your razee can be scraped

smooth with a flexible cabinet scraper made from an old saw blade followed by sandpaper with a medium-fine grit to prepare for priming. You may be surprised that the sandpaper actually roughens the planed surface, which makes a good "tooth" for the first coat of paint.

Tuning a Wood-bodied Plane

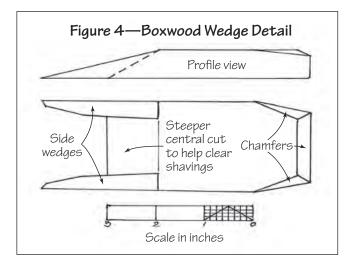
If you've ever tried to push a wooden plane for more than a few strokes, you may have had to ask yourself how to prevent shavings from clogging the mouth. First, the blade must be honed sharp. In the life of the plane, a too-narrow replacement blade may have been fitted and should be replaced with one that fits closely to the width of the mouth. The cap iron needs to fit tight against the cutting iron to ensure that no shavings can jam between them. The mortise needs to be smooth so shavings don't get hung up, and for the same reason feather edges at the tip of the plane's wooden wedge need to be trimmed flush.

If the plane is hard to push, lubricate the sole with beeswax or hone the blade again to keep it cutting smoothly. Setting the cap iron back ½6″ from the cutting edge may make the plane push more easily.



McCausland's razee plane, with its lignum vitae body and applewood handle, or "tote," has a mortise geometry much like that of the coffin smoothing plane shown in Figure 2, and the blade dimensions determine the size and shape of the mortise. Blade angle also determines the height of the tote, which may be shaped to suit the maker's hand. The length can vary as needed—this one is 16¾" long overall. *Inset*—This live-oak razee fore plane has a Sheffield-steel blade and cap iron made by Charles Buck.

To adjust for a finer cut or coarser, start off with a sharp rap with a 12- or 16-oz hammer against the butt end of a smooth plane or on the top of a razee jack



As shown in Figure 2, the upper part of the plane body's mortise on both sides is shaped to a low angle, relative to the cap iron, and this geometry also determines the profile of the wedge's outside edges. The angle minimizes slippage and facilitates tightening. The steep angle of the middle portion of the wedge allows shavings to clear. The back edge is square but has generous chamfers on the end and both sides, allowing light hammer taps for tightening and side-to-side adjustment.

or joiner just ahead of the mortise, which will usually loosen the blade. Sometimes a brass, steel, or wooden button is provided as a striking point. If you sight the cutting edge's projection along the sole and are satisfied with the depth of cut, another sharp rap on the wedge will snug it down. For a slightly coarser cut, just lightly tap the back of the blade itself to set it down a hair, or to angle it left or right as needed, before resetting the wedge.

Mark "Jake" Jaquith has made a career in New England shipyards working on a broad spectrum of watercraft from hovercraft to submarines, from classic yachts to commercial fishing boats. He has built Noank sharpies for the Mystic River Boathouse and is currently starting a 21' Alden Indian-class racing dory in his shop in Bath, Maine. He can be reached at tojakes@gmail.com.

Further Reading

*Building Classic Small Craft, by John Gardner (International Marine, 2004; this edition combines two previous editions that are out of print.)

Making and Mastering Wood Planes, by David Finck (Astragal Press, 1996)

*Making Wood Tools, by John Wilson (Home Shop Books, 2011)

Making Traditional Wood Planes, by John M. Whelan

*Available from The WoodenBoat Store, www.woodenboatstore.com.



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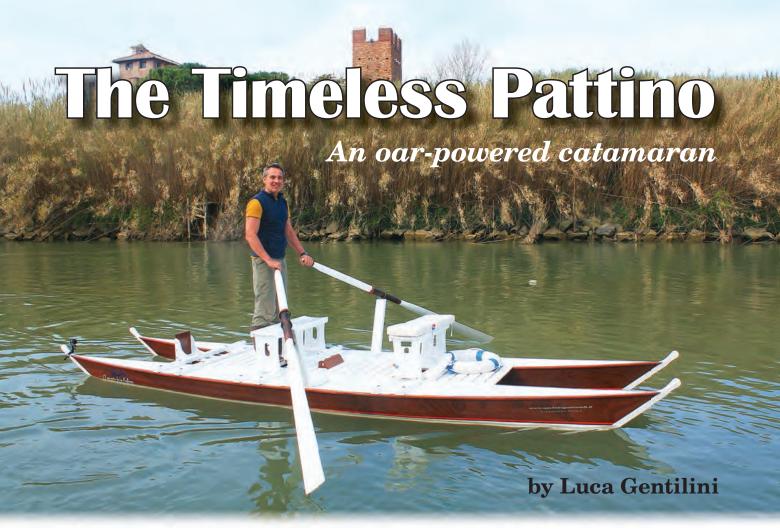






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he pattino, or moscone, is a most unusual type of rowboat. Originally built of wood, it developed in Italy beginning early in the last century and evolved over the subsequent decades from a strictly working boat to a pleasure craft for beach-going tourists. The word "pattino" comes from the Italian pattinare, which means to skate or slide—an apt description of how these boats move through the water. Moscone is Italian for any big fly, and is the name used for these boats on the Adriatic coast; it's a likewise apt description of the boat's insect-like appearance.

Pattinos, you see, are oar-powered catamarans. They have a wide stance and spread long, winglike oars. Originally humble, low-budget boats, pattinos were first built for coastal fishing, often by fishermen for their own use. They are simple, consisting of two long, narrow hulls joined by a pair of crossbeams. The boats have a flat deck (originally used for net storage) and a bench for the oarsman. The

once common along sandy beaches, primarily in central Italy: the Romagna and Marche regions on the Adriatic coast, and Tuscany (especially in the Versilia area) and Lazio, near Rome, on the Tyrrhenian coast.

Over the years, the simple design was refined for pleasure use, and became popular among tourists after World War II. Historic records and pictures of posh Italian beach resorts from as far back as the 1920s confirm

catamaran configuration makes the pattino stable in

the surf, while its light weight is an advantage when

launching and landing on the beach. The type was

the growing popularity of the pattino—which

Riccione 1948

Above—Italy's oar-powered catamarans, called pattinos, first appeared as workboats. After World War II, they became popular with beachgoing tourists. "The pattino," writes the author, "creates a delicious sense of calm and quiet." Right—Luisa Taba and Renato Braganti enjoy a pattino excursion with their seven-year-old son, Fausto Braganti, in Riccione, on the Adriatic coast, in 1948.

FAUSTO BRAGANTI COLI



The author has recently been building pattinos to the classic form but has updated the construction by introducing stringers and plywood. Traditional pattinos were built of heavy planks joined together with galvanized iron nails.

peaked in the 1950s and '60s; large rental fleets were common until the 1980s. Despite its simple and modest appearance, the pattino is unique—an icon of Italian summers. The boats were waterborne limousines for cheeky, happy-go-lucky Italian playboy adventurers. They were likewise symbols, as are the Vespa and the Fiat 500, of the Italian working class. Pattinos evoke enthusiasm and optimism.

There were different types and versions of pattino. Some had benches or seats for one or two people. Others carried a chaise longue, for practicing—as they said in the old days—"horizontal activities." Fleets for rent were normally painted in the livery colors of the resort where they were based. During the economic boom of

the 1960s and '70s they allowed thousands of Italian families to row their way through long summers. Anyone who spent a vacation on an Italian beach has memories of pattinos coming and going, with lines of people waiting to rent one. They were families

with children, groups of youngsters, or couples who just wanted to get as far away as possible from the crowded and noisy beaches. While it was evolving into a pleasure boat, the pattino also evolved into a lifesaving craft, with a simple deck and signature red hull. Such lifesaving boats are certified by the Italian Coat Guard, and plastic ones are still in use along the coast.

Over the years, many famous people have owned and enjoyed their own pattinos: Carlo Azeglio Ciampi, president of Italy from 1999 to 2006, kept a white one at his private beach residence in Santa Severa, north of Rome; Charlie Chaplin had his especially built by a shipwright from Viareggio, in Tuscany, for his home on a Swiss lake; Brigitte Bardot, well-known for her love of classic boats, also kept a pattino; the Italian writer Alberto Moravia owned one and wrote about the pattino in his novel Agostino, recalling his holidays in the 1940s on famous beaches of Forte dei Marmi in Tuscany; and the Italian singer Mina, whose 1960s song "Stessa spiaggia stesso mare" (The same beach, the same sea) extolled the pattino as a symbol of the sweet life—the dolce vita.

During the 1980s, the pattino's popularity slowly declined, perhaps because of competition from fiber-glass paddle boats and outboard motors, but more probably because prosperous times valued economic status over muscular agility. Fortunately, after years in the shadows, the pattino has returned to Italian shores. Nostalgic lovers and classic wooden boat admirers have reassessed this fine and elegant boat—not to mention the pleasure and privilege of going slowly! An early summer morning promenade becomes a dreamlike journey, a trip to taste simple, almost forgotten things. Sliding over the water, the silence broken only by the noise of the oars in the water, the pattino creates a delicious sense of calm and quiet.



The decks between a pattino's two hulls were once used for net tending and storage; today, they allow space for lounging and bench seating.



Above—The catamaran configuration gives the pattino great stability, while its moderate wetted surface makes for relatively easy rowing. Oars may be tended from a sitting position (above) or while standing. Below—While Italy is known for its classic Riva speedboats (background), the pattino, for many, is the icon of the country's coast.

was born in Rome and grew up in Lido di Roma, the city's seaside area. My relationship with the water began when I was a child; I lived by the sea all year long, fishing, sailing, and surfing. Pattinos were always present in

my childhood; during summers, my brothers and I—and the rest of our family—spent considerable time on the water, fishing, swimming, and rowing. Later, when I became a certified lifeguard, the pattino was part of my equipment. And as a lifeguard on the beaches near Rome, I witnessed the decline and disappearance of the classic pattino. Pattinos back then were different from those of today: they were bigger and had a different shape and layout. Compared to today's factory-produced fiberglass pattinos, the earlier wooden hulls were



heavier, but faster and stronger. However, they were originally often fastened with galvanized-iron nails that, after a few seasons, streaked the paint with rust stains, ruining the looks of the boats. But even then, in poor condition and leaking, pattinos would still carry out their duties.

After spending years learning the boatbuilding trade in local yards, in 2002 I decided to open my own company and workshop in Fiumicino at the mouth of the Tiber, the ancient river of Rome, and build classic



Below—The author's pattinos are easily disassembled for transport—either atop an appropriate vehicle, or on a trailer. Left—Reassembly requires bolting the crossbeams to the hulls, and the benches to the deck.

mahogany pattinos. But my mission evolved, and for years the primary activities of my workshop were yacht carpentry, teak decking, and refitting classic boats. We are now building pattinos again, and in fact are the only yard that builds the classic version of these boats.

This new pattino construction began when one of my customers, the owner of a 50' powerboat, asked me to build a special boat for his summer residence. His powerboat was moored 25 km away (about 15.5 miles) from his home, and the drive, the hunt for a parking spot, and then the dinghy ride out to the mooring in the bay simply took too much time—especially when all he wanted to do was to go out for a day cruise with his family, close to his summer beach house. So he asked me to build a pattino that's a bit larger than normal, for increased stability and to provide enough space on deck for his wife and two children. He decided to invest his energy differently—in rowing, rather than commuting to his boat.

So, from the lines of an old classic pattino, I drew a new one but kept the elegant vintage appearance. I envisioned a longer boat, at 19'3" (5.90m), with more beam than the earlier type, which traditionally was only about 13'9" (4.20m) long. A keel, frames, and two side

stringers give the new pattino more strength (the bare frame weighs just 36 lbs, or 16.5 kg) than the original solid-woodplanked pattino. This updated construction also allowed me to reduce the thickness of the hull planking. The result is a solid hull, with better handling, even in choppy seas or an onshore swell than an original—and better stability and balance. A slight rocker reduces the wet-

ted area of the hulls while maintaining buoyancy, and the extra length allows more speed while rowing and a steady momentum through the water. The planking is of top-quality mahogany plywood; the framing of solid oak and mahogany. I don't use any screws or nails in these boats, as I believe they will last longer without them. My 19' pattino has room for two 135-liter (4.75 cu ft) storage lockers for fishing, camping, or picnic gear. There is also space for an extra pair of oars, a mount for an electric outboard motor, and fittings for a wooden bimini-top frame. I make a smaller and simpler version at $16\frac{1}{2}$ (5.0m), without the lockers or reinforcements for an engine; this boat weighs only 165 lbs (75 kg).

In 2013, one of my pattinos was chosen by the Italian state television (RAI) for use in a documentary film. Director Guido Morandini made a journey of over 1,865 miles (3,000 km) walking, rowing, and biking, starting from and returning to the ancient city of Troy. My pattino was used for the part of his journey along the Latium Coast to Ostia Antica, the ancient port of Rome, and then into the mouth of the Tiber River, finally rowing upstream to Rome.

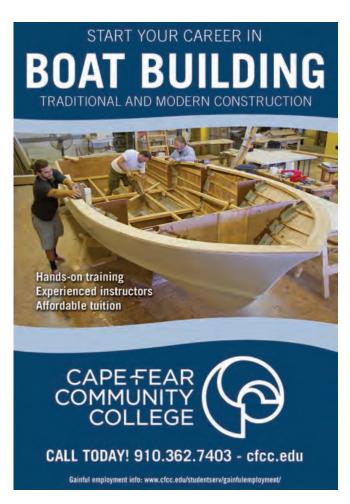
In 2012 I made a coastal trip from Fiumicino to Sperlonga and back (220 miles); in 2013 I went up Lake Maggiore from Aroma to Locarno (Switzerland) and back (160 miles). Without pushing too hard, in calm water, and rowing at a constant 28 to 30 strokes

per minute, I logged speeds of 3.8 to 4 knots. The pattino is for wooden boat lovers who are nostalgic for the *dolce vita*—those

who want a unique, elegant, and safe rowboat that they can even row standing up!



Luca Gentilini is a shipwright currently working as a joiner for Oyster Yachts of Southampton, England. Before that he was at Stirling & Son, working on the refit of THELMA, a 72' Silver's motoryacht that was once the tender to the J-class sloop VELSHEDA. He hopes to return to Italy soon to reopen the doors of his shop in Fiumicino—and to build more pattinos.







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The Wooden Boals



amamu Bay, Brazil's third-largest, is stunningly beautiful. To the east, the Marau Peninsula walls out the South Atlantic. To the west, the mainland's wooded hills shade small, artisanal cacao plantations. But among the mangrove forests and waterways inside the bay itself, fishing villages and towns dating back to the Dutch and Portuguese colonial 1600s still depend on a thriving mix of traditional workboats, a demand met by boatbuilders using local woods and drawing on various influences of the bay's long heritage.

Some dugouts and skiffs built here are types that date back to early times. Some are still powered by paddles and occasionally sails, but today they more likely rely on jury-rigged outboard motors. Some have local indigenous origins. Others were introduced by slaves from West Africa who brought their boat traditions with them, among them the *casca Bahiana*, a dugout that is still used extensively throughout this part of the coast. Still other types, such as the ubiquitous schooners (*escunas*), have hull shapes and rigs showing clear European influences.

On the shore of a low-lying peninsula covered in mangroves and coconut palms near the center of Camamu Bay lies the town of Cajaiba, the epicenter of boatbuilding in the state of Bahia. Famous throughout Brazil as the country's premier center for wooden boat construction, Cajaiba is particularly admired for the schooners that have been built there for at least a century. Local people trace the schooners' roots to Dutch colonial origins, but in some ways they resemble American Chesapeake Bay craft and in others they differ little from small coasting schooners once prevalent on the U.S. East Coast. Whatever its heritage, the escuna is as Brazilian as the samba—which is to say, it's an example of cultural syncretism, a New World hybrid of forms and materials. Reminders of another era, the schooners of Cajaiba remain a viable form of transportation, carrying everything from foreign tourists to cargoes of fruit.

Ask any escuna skipper between Rio de Janeiro and Recife where his boat was built, and the most likely response will be "Cajaiba," with a thumbs-up and a smile. Although wooden boats are built elsewhere in the region, such as in the town of Camamu itself, Cajaiba is synonymous with boatbuilding. Here, local boatbuilders, like sports superstars, are known by their given name or nickname. I met shipwrights named Japao and Ehilde who spoke of their colleagues—Bento, Manelli, Marildo, Miguel—the same way they would talk about Brazil's football heroes. Behind these artisans lies a community dedicated to carrying on the local tradition of turning out wooden boats built along traditional lines, using traditional materials and methods.

Above—Very well protected from the open ocean, Camamu Bay has a silty bottom and a significant tidal range, with shoal waters making groundings in the serpentine channels a commonplace occurrence.

of Cajaiba

A thriving Brazilian tradition

by Dan Brayton



Above—The whole town of Cajaiba, according to local sources originally settled by Dutch colonists, has historically played a part in boatbuilding. Teenagers, old men, and all ages in between scuttle between boatyards on a footpath that threads along the low-banked waterfront, an ideal place for construction. On the bay side of the trail, large boats line the path one after the other, lying stern-in and bow-out, with their broad transoms forming a wooden wall. Most are protected from the weather by rudimentary boatsheds.

Right-Numerous workshops line the landward side of the footpath, and boatbuilders set up bracing so they can build the hulls of small boats right-side up, working in the open or under makeshift shelters.





Above—Cajaiba's boatbuilders take advantage of the 2-meter (about 6'6") tide range by building boats along the shorefront. The village lies along a well-protected bay, and large boat construction sheds are built in the intertidal zones. The building site is regularly awash at high tide, and in the early stages of hull construction the builders must wait for low tide to do any work at all. Most of the hull below the turn of the bilge stays wet throughout construction.

When a new schooner is finished, launching requires only a good push on the transom when the tide is high.

Below—Because the schooners are quite wide and shallow and the bottom is silty, careening at quayside is easy and does not damage the hull. This schooner, about 45' on deck and careened on the Camamu waterfront, is one of the largest.



NELL BRAYTON



Above—The most important local hardwood used by boatbuilders is jaqueira (Artocarpus heterophyllus), which is favored for hull, deck, and bulwark planking. The tree produces a sweet, strong-smelling edible fruit, sometimes called stink-fruit (also known as jack-fruit) because of the tree's pungent sap. The wood is hard but fairly easy to work, bends well, and is exceptionally rot-resistant. Jaqueira is

also used for the "belt" (cintado), which is like a combined sheerstrake and beam shelf sandwiching the frame heads once the frames have all been set up on the keel. Jaqueira used to be abundant around Camamu Bay. Today, however, teams of Cajaiba men must venture far afield to seek out the best wood to truck back to the boatshops, including compass timber for specialized pieces such breasthooks and frames.



Left—For keels and other structural timbers, the builders prefer a wood they called "alanji"—perhaps a local nickname for angelique (Dicorynia guianensis). The frame futtocks, or "arms" (braços), are of sawn jaqueira or sukupira (Diplotropis martiusii), lagged or riveted together with galvanized steel. No floor timbers are used, and there was no evidence of ballast keels. Hull planking is spiked to the frames through drilled pilot holes, which are filled after nailing. The seam caulking is a mixture of wood shavings and glue known as calafeta. Jaqueira deck planking is fastened to the deckbeams with galvanized steel nails, with their heads recessed and bunged; decks are left bare, with pitched seams.

Bottom left—Most schooners have a substantial platform built off the stern, made of planks supported by extensions of the heavy sheerstrakes. This provides access for working on the transom-hung rudder and its gear. Small boats still use tiller steering, but wheels prevail on large schooners, with synthetic steering lines running aft from amidships to a welded stainless-steel yoke that is lagged or bolted to the trailing edge of the rudder about a foot above the waterline.



DAN BRAY



Above—Cajaiba is not the only boatbuilding center in Camamu Bay. Large boats are also built in the town of Camamu. During a four-day visit, we saw well over 40 large hulls under construction in the two ports, all of them carvelplanked and fastened with galvanized steel nails and spikes. Most of these were schooners of 35' to about 50' on deck under construction at Cajaiba.

Left—The difficulty, and cost, of searching for suitable materials isn't the only challenge to traditional Cajaiban boatbuilding methods. Instead of hand tools—including a distinctive type of single-handed adze—builders are increasingly turning to power tools. In open shoreside workshops, some builders use hand power planes, thickness planers, and bandsaws. At the same time, I saw two men hand-sawing galvanized-steel spikes and peening their ends with a rusty old flywheel serving as an anvil. As in the past, no plans or construction drawings are used, although builders' models are common.

Lower right—I watched as one boatbuilder used a chainsaw to carefully shape a jaqueira plank. After he had finished, there was no way to tell it hadn't been done with a bandsaw. Safety equipment was nowhere in evidence. Every builder I saw was barefoot or wearing flip-flops; most wore shorts and T-shirts.



ISONHART

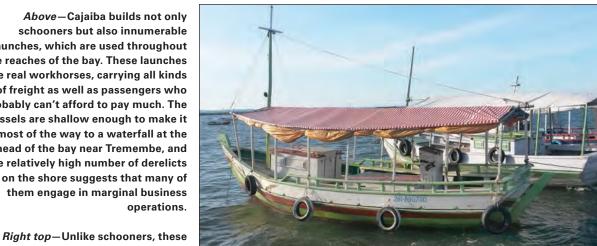


Above—Today, few Cajaiban schooners carry sail. The vast majority are driven by diesel engines turning fixed, three-bladed propellers. Yet nearly all of those over 30' carry two stump masts, usually with tiny topmasts, long booms, no gaffs, and substantial stainless-steel standing rigging. Instead of sails, the rig supports an awning that stretches the length of the deck to block the powerful tropical sun and seasonal rains. The wheel is amidships, and usually just forward of it is a large deckhouse with a sliding companionway hatch. A 40' schooner steaming along at 7 knots with a bone in her teeth, proud skipper at the wheel, and smiling tourists on deck, is a common sight on a fine day.

Below—Generally, schooner topsides are painted light colors, with bulwarks of a contrasting bright color such as red, green, or yellow. Only rarely are the bulwarks finished bright, usually a sign that the owner is foreign. No matter what their size, almost all have low freeboard, substantial bulwarks, and a flat sheer rising sharply forward to a prominent beak beneath a long bowsprit, and almost all have elegant and sturdy taffrails.







launches, which are used throughout the reaches of the bay. These launches are real workhorses, carrying all kinds of freight as well as passengers who probably can't afford to pay much. The vessels are shallow enough to make it most of the way to a waterfall at the head of the bay near Tremembe, and the relatively high number of derelicts on the shore suggests that many of them engage in marginal business

launches do not carry a bowsprit or beak. They share the same basic shape as their larger cousins, however, and are descended from boats originally designed for sailing but adapted for engines. They share common traits, as well, with their taffrails, broad transoms, and forward deckhouses.

Right lower-Without masts to support awnings, launches are fitted with stanchions to hold up awnings that keep the deck shaded or dry. Often they have enlarged deckhouses, as well.



DAN BRAYTON (ALL THIS PAGE)



Above—Recreational sailing is rare in Bahia. We saw only one boat that was clearly set up for pleasure sailing—a 20' sloop moored in the river that forms the harbor at the town of Camamu. The only other sailing vessels in evidence were small workboats, such as the one shown in this photograph. Fishing boats, skiffs, and dugouts cross the bay with the day's catch or work the inner reaches for crabs among the mangroves that stretch south into very thin waters. It is common for these fishing craft to be paddled upwind and sailed downwind.

Left—Many small boats carry crab traps made of hand-woven cane fibers and baited with fish offal.

Below—Small craft and fish traps line the beaches all around Camamu Bay, although at Cajaiba the waters near shore are kept clear for launching boats. The variety of small craft—from cross-planked flat-bottomed skiffs to dugout canoes—demonstrates the rich cultural influences still exerted throughout Camamu Bay.



Dan Brayton is a member of the Department of English and American Literatures and the Program in Environmental Studies at Middlebury College. He has worked aboard sailing vessels in the Atlantic, Pacific, and Caribbean and has held visiting appointments with Sea Education Association, the Williams-Mystic Program in American Maritime Studies, and Semester-at-Sea. His book, Shakespeare's Ocean: An Ecocrifical Exploration, published in 2012 by the University of Virginia Press, won the 2012 Northeast Modern Language Association Book Prize.

NOTAY BEAVEON

ARITIME MUSEUMS

If you want to learn more about wooden boats, **I**particularly about their origins and history, visit a maritime museum. Each of the museums listed here has something to offer the wooden boat aficionado from half models and historical photographs to full-sized watercraft. Boatbuilding skills are sometimes taught under the auspices of maritime museums and there are often gatherings where people can rendezvous with their boats. Plan a summer visit to a maritime museum — call today for more information!

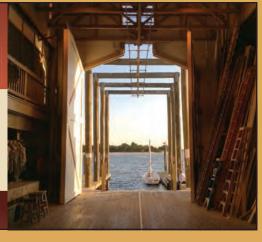


Learn the Art of Traditional North Carolina Boatbuilding

The Harvey W. Smith Watercraft Center at the North Carolina Maritime Museum offers several boatbuilding courses including Introduction to Wooden Boatbuilding, Build a Boat in a Day, and a Nine-Day Boatbuilding course. Visit America's Favorite Town. 2016-17 course schedule available at ncmaritimemuseums.com



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Apprentice for a Day Boatbuilding Program: 25' Hooper Island Draketail at the Chesapeake Bay Maritime Museum Boatyard in St. Michaels, Maryland

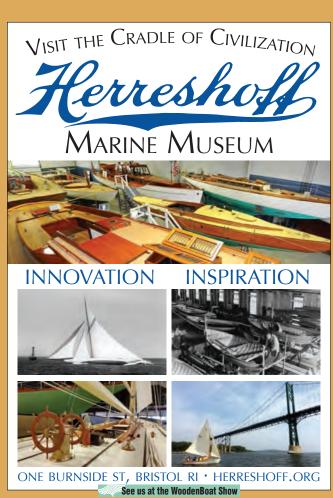


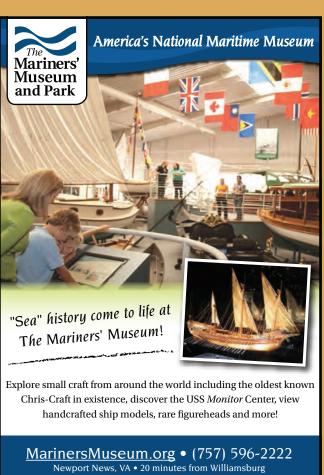
Saturdays & Sundays, 10am-4pm in CBMM Boatyard

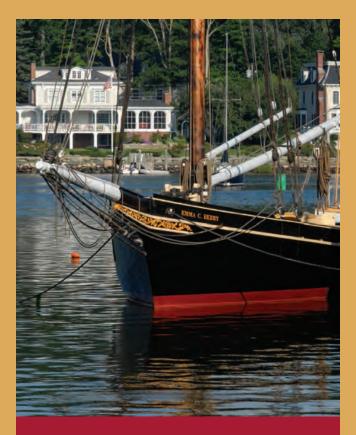
Single classes: \$45 CBMM members, \$55 non-members Commission CBMM to build your next small craft in the AFAD Program!

Learn traditional boatbuilding under the direction of a CBMM shipwright. You can be part of the 17-week process or sign up for those aspects of building a boat that you want to learn. Must be 16 or older unless accompanied by an adult. The Draketail will finish in September and is available for sale, with all proceeds benefiting the Museum. Contact afad@cbmm.org with questions or inquiries.

Drop-ins welcome or register by contacting 410-745-4941 • 213 North Talbot St., St. Michaels, MD • More information at cbmm.org







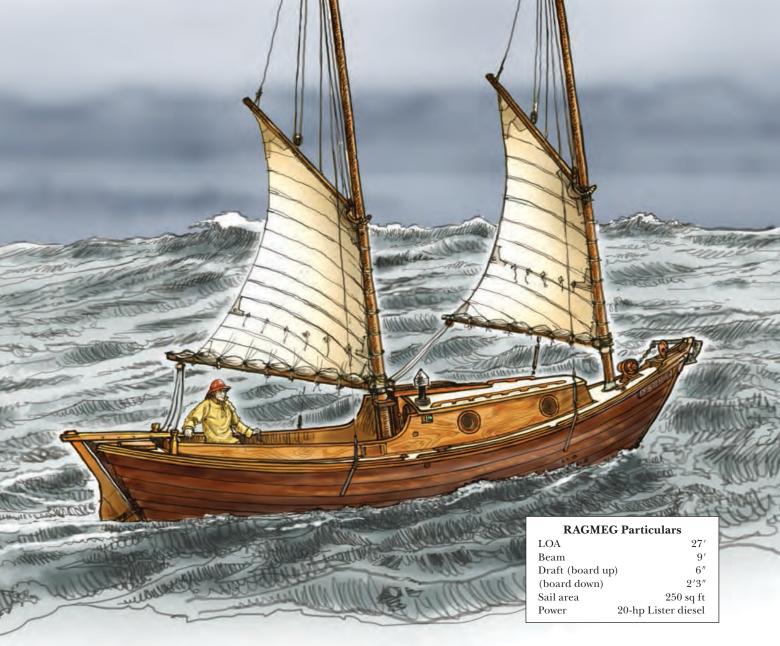
EMMA C. BERRY

A STORY WITH A CATCH

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The Odyssey of RAGMEG

Nova Scotia to California in a 27' dory

by Bob Germann Illustrations by Jan Adkins

In 2002, I was in my late 70s, retired, and bored. In earlier years, I would probably have been at the harbor working on a boat or sailing. But after selling my cold-molded 31' Herreshoff cat-ketch, I was pretty well resigned that, at my age, my boating days were over.

However, in the quiet of my room one lazy Sunday afternoon, just daydreaming, I asked myself what boat

would be ideal, without any regard for cost, investment, or any other practical consideration. Things such as one-upmanship didn't enter into this. Even I was surprised that the boat that meant the most to me, the one I related to most directly, was the first real boat I ever owned—a dory.

I typed "St. Pierre dory" into my computer browser.

Above— At age 80, the author bought a 27' St. Pierre Dory in Nova Scotia and set out on a solo voyage of 10,000 miles to sail her home to Oceanside, California, via the Panama Canal. His longest open-water passage was in the Caribbean Sea, where he encountered a storm that knocked his auxiliary engine off its mounts. After eight days without power, he fought to gain ground to windward toward Isla Mujeres, Mexico.

I have always admired the type's classic sheer and its seaworthiness. I envisioned a copper-riveted, lapstrake hull with a gaff-headed cat-schooner rig for easy singlehanding. Since this game would cost me nothing, I added more search terms: comfortable cabin, fireplace, opening bronze ports for light and ventilation, proper ground tackle, all the latest navigation gear. I topped it off with a spacious cockpit and a sturdy diesel engine, then clicked on the "search" button. To my utter amazement, the exact boat I imagined appeared on my monitor. I could even see the Charley Noble stovepipe. I phoned the broker in Chester, Nova Scotia, then the owner, just to share my astonishment. They both understood that I had no intention of an 8,000mile round-trip to see the boat. It was pleasant to share our appreciation for the type, but that was as far as any of us expected this to go. I was soon to learn that events would prove even more wonderfully improbable than the way this story began.



With the encouragement of his wife, Mary Ellen, Germann went to Nova Scotia in June 2002. He ended up buying the 27' dory, built in 1990 in Rose Bay by Peter Willis, a native of Cowes, England. Her pine planking was copper-fastened over oak frames, and she had teak decks and spruce spars. Renamed RAGMEG, she was taken to Snyder's Shipyard for a refit that included adding a steel centerboard for improved windward sailing. By the following spring, at 80 years old, Germann was embarking on a 10,000-mile solo voyage to California via the Panama Canal. He was already referring to himself and his boat as "we."

His first days with the boat, however, were inauspicious....

On April 1, 2003, just one week after the river ice-out, my plane landed at Halifax. Two weeks later, I was rushed to the hospital with a heart attack. This was a complete surprise. After a few days of bed rest and a very favorable stress test, my cardiologist reluctantly agreed that I could continue with preparations for our voyage.

On May 28, we started down the LaHave River. The Atlantic waves were not like the Pacific swells I knew so well. RAGMEG pounded into each one, tossing icy spray over the cockpit. Within minutes, my heavy woolen jacket and jeans were sodden. I had not put on my foul-weather gear, not knowing that the pleasant weather of the river would become so wet and icy as we turned south.

Five hours later, I was drenched and frozen. About 6 miles off the coast, with no land or traffic in sight, I shut down the engine and went below to change and take a break. As soon as I slid the hatch closed, I was in another world. There was no wind, no icy spray—even the motion of the boat was easy. I struggled out of my clothes, toweled off, and joyfully put on dry clothing and foulweather gear. Before I went back out there, I just wanted to sit down for a minute and rest against a soft sail-bag.

I woke when I felt RAGMEG bump into something solid. A glance at my watch showed I'd been asleep for

45 minutes. I threw back the hatch cover and jumped out of the cabin into the cockpit. Directly to port was a solid wall of granite not 2' away from the side. To starboard, 15' away, was another wall of gray granite soaring 40' high. I started the engine and threw her into reverse. Once away from this granite tomb, I spun RAGMEG around and set a course for Shelburne, the next port down the coast.

Within an hour, fog rolled in. RAGMEG was surrounded by lobster trap buoys, and with a *wham*, the engine stopped and we were dead in the water. Leaning over the side, I could see that pot warp had wound up in the propeller, but I could not reach it with the gaff or boathook. We seemed to be drifting, so I dropped anchor. There was little breeze and only a gentle swell.

I knew I was going to have to go into the water to free the prop.

I rerigged my tether to allow enough scope to reach the prop. Then I put the safety ladder over the starboard side, took off all my clothes, and put on the foul-weather jacket and clipped on the tether, then put on my facemask and snorkel. With a fillet knife in hand, I stood on the gunwale, ready to jump into the water... then, out of the corner of my eye, I noticed that my seawater temperature gauge was reading 37 degrees! I got down. "I don't want to go into that water," I said to myself. But I was out there, alone, and I was not going anywhere as long as that line fouled my propeller. So asking myself whether I would go into that water to save my life, I climbed back up onto the gunwale and jumped out into midair.

I had forgotten that the foulweather jacket had the type of CO₂ cartridge that fires automatically. So, of course, the coat inflated as soon as I hit the water. My fillet knife flew out of my hand, and I found myself bobbing on the surface, with no chance of diving to the propeller. I knew that hypothermia would set in quickly. I had to get out of the water. I tried to pull myself up over the gunwale, but could not. The ladder saved my life.



Responding to his call for aid, the Canadian Coast Guard towed RAGMEG—and the lobster pot—25 miles back to the LaHave River, where a diver cleared the propeller. The next day, Germann set out again, in fair weather, and reached Shelburne. His first morning there, however, he suffered another heart attack. After emergency-room treatment, he flew home to Oceanside for more medical attention. Ten days later he was back aboard, heading for the U.S. Eastern Seaboard. Like any long voyage, his had tribulations: towed by a Maine lobsterman after the engine overheated; inadvertently crossing over the towing cable between a tugboat and barge, very luckily without harm; running aground; transmission troubles. Most of his passage of the Intracoastal Waterway, however, was uneventful. But then he faced the Caribbean, his longest open-water crossing. After struggling to find an anchorage for the night off Cuba, out of the shipping lanes, he took time to note his feelings in the log, sensing not for the first time or last that his luck was the work of a divine presence that wished him to complete the voyage.



I was out there all by myself in the Caribbean Sea about one-and-a-half hours before darkness without a clue about where I could drop anchor for the night. You might be surprised, but I must tell you, that I felt no apprehension. I knew I would be all right. I don't know how I knew that, but of one thing

I was certain: I was not really here alone, nor on my own. I knew another power was with me, guiding me, caring for me...managing things, if you will. If it were meant that harm should come my way, harm that I could not avoid by using my own wits, then so be it.

The St. Pierre Dory

Early in the 17th century, a few Europeans landed on the eastern shores of the New World seeking a better life for themselves. Their immediate needs for food and shelter were satisfied by the surrounding forests, but to access close-at-hand protein in the form of abundant fish, they had to have boats. Small, flat-bottomed, high-sided hulls were the simplest to build, and such boats could be pushed off the beach and rowed through the surf.

Progressively, they perfected these workboats, arriving at the seaworthy dory. Used for near-shore work, such boats, eventually, were famously stacked aboard schooners and carried to far-flung fishing grounds. Many variants emerged. In the 1930s, the largest were introduced by the French government as seaworthy engine-powered fishing boats for the challenging waters off Newfoundland, around the islands of St. Pierre and Miquelon, which are still French today. In *National Fisherman* and later in *The Dory Book* (International Marine, 1978), maritime historian and boatbuilder

John Gardner wrote glowingly about the St. Pierre type. He published lines and construction plans for a 26'10" working dory and two 27-footers modified for pleasure use, the first with a beam of 8'2" and the second widened to 9', which matches RAGMEG's beam. Gardner helped rekindle interest in many traditional types, and the St. Pierre dory was no exception. During the 1960s and '70s, many boatbuilders began to see what I, too, would see in the St. Pierre type: a commodious, traditional, seaworthy, shoal-draft boat that would be comparatively inexpensive to build and maintain. Gardner's book showed photos of dories—each with a unique cabin style—built from Nova Scotia to Alaska and even Okinawa. Builder Mark White of Alaska documented his construction in Building the St. Pierre Dory (International Marine, 1978). Like Gardner, White was skeptical of sailing rigs. But those were times of experimentation, and many builders—including the builder of the boat I discovered in Nova Scotia—inevitably tried traditional rigs of one type or another.



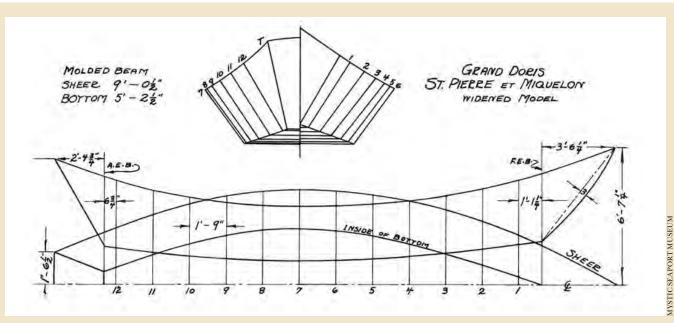
During the Caribbean passage, he lost engine power for eight days—the engine was even knocked off its mounts—and broke the fore gaff in a storm. Approaching shore at Rio Colorado, Mexico, without power and with a damaged rig, he also realized he could not raise the centerboard, which was loaded with marine growth.

Miraculously, the fishermen watching my approach knew instinctively why I was waving my arms and With his engine out of commission, Germann broke his fore gaff during a heavy-weather jibe, after which he limped toward the Mexican coast. Off Rio Colorado, he found a warm and helpful reception among local fishermen.

pointing out to sea. They pushed their *pangas* off the beach, came out to RAGMEG, and swarmed aboard. They towed RAGMEG into deeper water, where they helped me anchor. "Francisco" seemed to be the leader. Even though no one spoke English, they soon understood that I would like to meet the port captain. *No problema*. I needed a diesel mechanic. *No problema*. I needed a carpenter to fix the fore gaff. *No problema*. I needed to change American dollars into Mexican pesos. *No problema*. I would like to find a phone so I could call my wife. *No problema*. By now we were all laughing happily together with each question, and finally, I asked if there was someplace I could find *huevos rancheros* for me and *cerveza* for everybody. *No problema!*

By this time, I had no secrets. These men had seen inside my cabin. They had seen my dollars, VHF radio, camcorder, Autohelm, binoculars, EPIRB, depth-sounder, GPS, chart plotter, even the lock and keys for my cabin hatch, everything. Not wanting to insult them, I didn't lock the cabin as we were leaving. Francisco, however, cut a length of fishing line, threaded my padlock key on it, and tied it around my neck, then clicked my cabin padlock shut. Ashore, the port captain approved my *zarpe*, and we were officially admitted to Mexico.

The following morning, pangas surrounded RAGMEG again. Francisco respectfully carried tools for the mechanic, Pedro. Within minutes, they devised a way to lever the heavy Lister diesel engine back onto



After documenting a 26'10" St. Pierre working dory, maritime historian John Gardner drew two modified designs for pleasure use. The author's hull was built to Gardner's wider version, with a beam of 9'1/2" for its overall length of 27'.

Thanks to a sympathetic crew of the required four linehandlers and a pilot, the tiny RAGMEG was able to transit the Panama Canal, dwarfed by the locks and by enormous ships.

her mounts. They discovered that my fuel line had a crack, and they brazed it shut. My shattered fore gaff was taken ashore; by the end of the day I had a new hardwood one, at least as good as the original. They drove me on a 50-mile round trip to fill my jerry cans with diesel.

After my stay at Rio Colorado, I admired and respected these good and ingenious fishermen. I had not been invited to their village. I landed there because I needed help. They opened their hearts and made it possible for me to proceed on my way in far better shape than when I arrived. On June 20, 2004, as I raised RAGMEG's anchor, Francisco, Vidal, and Luis came by in their pangas to see me off and be sure all was well. As we waved goodbye, Francisco called out, "Now we are *pescadores* again." I thought to myself they deserved to add that they were also diesel mechanics, master woodworkers, innovators, and compassionate, excellent human beings.



After landfall in Mexico, Germann made his way south, ran aground once, narrowly avoided a reef, and had more engine woes. At the Colombian island of San Andreas, he encountered other cruising sailors, one of many such encounters, and after they helped with repairs he sailed in company with them to the bucolic San Blas archipelago off Panama, and from there to Portobelo and then the Canal.

Our passage from Portobelo to the Panama Canal was easy. As we approached, it was awe-inspiring to see scores of massive container ships from all over the world queued up in single file outside the entrance to the canal. I counted at least 35 ships lined up in the rain and fog. It was daunting to realize that my tiny wooden RAGMEG must find a place in line along with these monsters.

Huge pylons, one red, one green, soared high above the sea to mark the canal entrance as we followed the main channel to our assigned anchorage. I was weak in the knees, struck by the realization of where I was and what I was doing. At the Panama Yacht Club, near the anchorage, the dockmaster confirmed that every vessel, large or small, transiting the canal is required to carry four able-bodied linehandlers and a licensed pilot, who must be fed and provided water, sanitary facilities, and accommodation. RAGMEG did not even have a head. I would need deck cleats and closed chocks capable of handling lock lines the same size as those that containerships used. I knew there was no way I could conform to these requirements. I was overwhelmed, and dejected. I was not going to be able to bring RAGMEG

through the Panama Canal.

Rounding Cape Horn was no option. Giving up and selling RAGMEG was no option. Trucking her 35 miles across the isthmus was my only choice, albeit an inglorious one. Resignedly, I started making arrangements, taking RAGMEG to the dock, right outside the windows of the PYC office. She had always been able to open doors—maybe she could still work her magic. When I went in to pay Roger, the dockmaster, he told me she would have to move, but he could not take his eyes off RAGMEG.

Other cruisers told me how difficult and expensive it was to find pilots and linehandlers. But Roger,

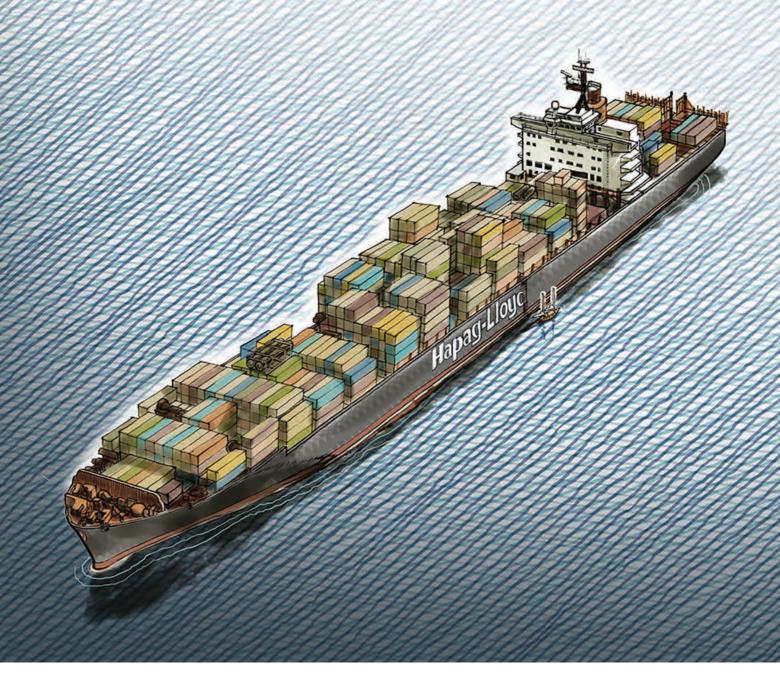


inspired by RAGMEG, rounded up four high school friends, all experienced linehandlers, plus his friend Jimmy Wong, a sought-after pilot, to take her through.

After seeing the boat, they were undaunted. They obtained lock lines and prepared fenders made of old tires, securing them in a most seamanlike fashion. Victor located and installed a large foredeck cleat. On the subject of food and drink, they said, "Don't worry, Capt. Bob—just give us a little money for some Kentucky Fried Chicken, bread, lunchmeat, and soda. We'll even make sandwiches for you." I didn't even mention the head.

On September 12, 2004, the 27' RAGMEG entered the line of ships heading toward Gatun Locks. That evening, we moored at Gatun Lake. Pilots are treated royally, so a launch took Jimmy ashore, as is the custom, so he could spend his evening at home. Later, all four linehandlers slipped over the side in the dark of night and swam ashore so they could do the same.

In the morning, security officers boarded RAGMEG, saying they had picked up four men claiming to be my linehandlers. I vouched for them, but the officers still gave the boat a thorough search. Jimmy and the linehandlers returned by launch, as if nothing had happened.



With her engine disabled and after days with no wind, RAGMEG drifted far out into the Pacific. Remarkably, the passing German containership STUTTGART EXPRESS, 964' LOA, put about in response to the author's radio hail and the ship's engineers fixed RAGMEG's auxiliary engine while the tiny sailboat was tied alongside.

We cast off only to find that RAGMEG's transmission had failed. We quickly moored again and found a mechanic, but Jimmy had to delay our transit. I already didn't have enough cash to pay everybody, and delaying transit could bring heavy fees. In one voice, they all said, "No problem, Capt. Bob. Don't worry." With the transmission repaired, we crossed Gatun Lake the next morning to the Mira Flores Locks. We shared the final lock with a spotless Chinese ship, BRILLIANT SKY. She slowly moved into the lock directly behind RAGMEG, filling the lock with less than 12" to spare on each side. Her two massive anchors were hanging directly over us as we stood in tiny RAGMEG's cockpit. When the hundredyear-old gate eventually swung open, it revealed the Pacific Ocean lying before us. Against all odds, RAGMEG had made it.



Once through the canal—and escaping his first (and last) attempted mugging on his way to a bank in Panama City—Germann worked his way up the west coast of Central America, in unseasonably fair weather. From Puntarenas, Costa Rica, he flew home for three weeks, then returned with parts and a list of refits for the voyage north: transmission and starter motor rebuilt, alternator and centerboard cable system replaced, motor mounts reworked and secured, raw-water cooling system overhauled, solar panel connections replaced. He found a warm greeting in Corinto, Nicaragua, despite that coast's sketchy reputation among cruisers—even an electrician would accept no payment for repairs. Kids swimming at Puerto Madero, Mexico, helped clear a fouled propeller.

Favorable weather continued. Then, 52 miles off Puerto Angel, his engine failed again. In three days of calm, he drifted out to 138 miles offshore. Favorable winds came up, driving him up to 8 knots on course, but at night he dropped the sails for safety, afraid of falling asleep at the helm. Nevertheless....

We have talked about dead engines, dying batteries, too much wind, not enough wind, and danger. Those realities are always with the cruiser. Another reality is that these days are uniquely pleasant and rewarding, if we can look away from the other realities and just look around to see what is there. Drifting, I found myself experiencing a place most people will only dream about. I enjoyed the gentle motion of a classic wooden boat floating on an exquisitely beautiful, cobalt blue, crystal clear ocean under a cloudless sky on a warm and sunny afternoon, skin caressed by a soft breeze, knowing that for the moment at least, I was absolutely free of any obligation other than to savor it.

Hearing a small splash beside the boat, I made eye contact with a magnificent sea turtle. Then, through the very clear water below the turtle, I was utterly astounded to see the ocean floor only 4'below RAGMEG's bottom. I stared agape. I was more than a hundred miles at sea. I knew of no shoal here. And then I saw the "shoal" move. This was not the bottom, but a huge school of tiny fish. Now I understood that RAGMEG was part of the food chain, attracting small fish, then larger fish. There were always a dozen or more sea turtles around the boat, and sea snakes, too.

This was an aquarium such as I had never seen, a wholly natural display. I was simply privileged to see it, and to wonder. I did not choose to sail over a hundred miles into the open ocean to see this marvelous display. I didn't even know it was here to be seen. Drifting inadvertently earned me an admission ticket for this unforgettable natural performance.



In calms, Germann drifted even farther out. He wondered at what point he should consider activating his EPIRB. Then, a ship appeared—the 964' German containership STUTT-GART EXPRESS. Remarkably, she came about to render aid in answer to his radio call for assistance. Alongside, RAGMEG rolled and her foremast tricolor light snapped off, and in trying to fend off, Germann was injured.

The long boarding ladder reached the cockpit and allowed three crew members of the STUTTGART EXPRESS to descend to RAGMEG. As these gentlemen in spotless white coveralls and white gloves stepped aboard, they introduced themselves as first mate, chief engineer, and assistant engineer. The first mate confidently announced, "We will fix your engine." I hardly thought that possible, but did not let on. Nor did I mention my injury to them for fear they might feel obligated to take me aboard and cut RAGMEG loose.

Bags of tools were lowered. The men began systematically taking my engine apart. But it was evident these men knew what they were doing. They spoke to

one another in German and to me in perfect English. I watched, disconcerted, as they removed valve covers. The raw-water cooling system hoses were stripped away. Next came the exhaust hoses, which were faulty. How would I replace them? They tapped on valves, conferred, and kept working. Methodically, they cut new gaskets. New hoses appeared and were installed.

Three hours later, the first mate directed me to start the engine, but my battery proved too weak. Without skipping a beat, he radioed for a replacement; soon a battery was lowered to RAGMEG and connected. It took four tries, but the engine turned over and started running. They ceremoniously replaced the engine compartment cover, sent their tools back to the ship, said goodbye, and ascended the ladder. Then, the captain himself came down to pay his respects. As he was departing, he paused on the ladder, and said, "We are a little behind schedule for our transit of the Panama Canal, so we won't take time to bring our battery back aboard. Please keep it." It was his way of presenting me the battery he knew I couldn't do without. With a parting salute, he was gone. I watched the stern of STUTT-GART EXPRESS recede over the horizon, knowing I had been privileged to share an unusual incident with most worthy people. I will forever cherish it. ¡Gracias a Dios!



Two days later, Germann was in view of the Puerto Angel. His injuries turned out to be fractured ribs and a dislocated femur. Taken in by a local family, he soon recovered. He set out again, without running lights and plagued by more transmission problems, for Acapulco, where more repairs were made. Crossing to Cabo San Lucas, he prepared for the final thousand-mile push to San Diego, stopping only when necessary. His final day's run was a "bumpy and cold ride" from Ensenada, Mexico, to San Diego, where he had a joyful reunion with his wife. A few days later, in company with friends, he sailed home to Oceanside.

Several times I have been confronted by obstacles and circumstances that well could have prevented my completing this odyssey successfully. Instead of being discouraged, I actually experienced joy in meeting the challenge. I firmly believe each of us has this strong, latent reserve within us. When tested, we can call upon it. It is there. We must only have faith and belief in ourselves. People ask about the adventure of the voyage. Sure, that's part of it. But the real message I share is this: If there is something you want, it's okay to go for it. Don't be stopped by the notion that it is not for you. You can make it happen. This is not limited to survival at sea. It can be success in a business venture, improved relations with loved ones, achieving a goal that you might think has passed you by. Don't let go of that dream!

Bob Germann is a retired oral surgeon who grew up in Santa Barbara, California, and has lived in Oceanside since 1959. He sold RAGMEG in 2005, but maintains close contact with her current owner, Keith Wilson, who has restored her.



Return of the Devil Boat

The restoration and preservation of PT-658

by Randall Peffer

t was the phone call you never want to get."
That's what the World War II veterans in the current crew of PT-658 tell the "younger generation" of volunteers when they break from slinging a 900-lb, rebuilt transmission down through the engineroom hatch. The men of 658 are gathered on the afterdeck to share coffee, sandwiches, a tub of popcorn, and—of course—war stories aboard this living legend.

Sitting in its Quonset-hut-style floating boathouse on Swan Island Lagoon in Portland, Oregon, PT-658 looks fresh, fast, and aggressive with her camouflage paint scheme and ammunition racks of gleaming 40mm shells. Even standing still, this 71-year-old boat seems to growl. You can almost hear her three Packard engines roaring into battle. She is the only fully

restored and operational U.S. Navy PT boat afloat—complete with WWII-era weapons, electronics, equipment, and accessories—which include a vintage Navy toaster in the galley.

In 2012, PT-658 joined other historic Navy vessels such as USS CONSTITUTION on the National Register of Historic Places. She is an icon not only of America's David-and-Goliath fight against superior German and Japanese forces at the beginning of World War II, but just as important, a symbol of what Joseph Conrad called the "fellowship of the craft." The boat is a floating testimony to brotherhood.

Now, as the younger generation—men in their 60s—gathers around World War II veterans Bud Case and Maury Hooper, the crew is retelling the story of one of

Above—Now hailing from Portland, Oregon, PT-658 is the only restored and fully operational PT boat in the United States. PTs were fast and nimble, and critical to Allied victory in World War II.

PT-658 by the Numbers

78'6" Length 20'1" Beam 5'3" Draft Displacement 48 tons Three 5M-2500 Packard Marine Power V-12 engines Cruising speed 25 knots 42 knots Top speed Fuel consumption 500 gallons of 100-octane fuel per hour 3,000 gallons Fuel capacity Usual crew 2 officers, 14 enlisted Armament 40mm Bofors M3 cannon, 37mm Oldsmobile M9 autocannon, two twin .50-caliber Browning M2 machine guns, two M4 20mm Oerlikon cannons, four Mk13 aircraft torpedoes, two M6 300 TNT depth charges, and two MK50 rocket launchers

the "little setbacks" that could have sunk the boat for keeps and dashed all hope of the restoration project.

"Your boat is on fire, and we have nine units there," the voice of a fire department dispatcher told one of the veterans. "You better get down here."

This was in October 2003, when the veterans and volunteers who called themselves Save the PT Boat, Inc. thought that they were on the cusp of relaunching PT–658 after nine years of challenging restoration work. A short circuit in an electrical panel had ignited a fire. Only the quick response of the firemen saved the boat from total destruction, but the historic PT had a hole burned through her new deck and serious damage to deckbeams, floor timbers, and a bulkhead. The stateroom was gutted.

The veterans took a deep breath and shrugged it off. They told each other, "We've faced tougher stuff before." Like rebuilding reef-wrecked hulls in the Solomon Islands. Like polishing fuel by straining tens of thousands of gallons of aviation gasoline through a chamois cloth to fill their vessels in the Philippines. Like going toe-to-toe with a Japanese destroyer or a German *Schnellboot*.

"The day after the fire, the whole boat was a cloud of smoke and ash," remembers one of the volunteers, "but a vet told me, 'Grab a broom. Let's clean up this mess. We got work to do."

So it goes. As one veteran says, "When you served in a PT boat, you got pretty used to being a freelancer. It's just like in that old TV show, *McHale's Navy*."

War II. But today PT-658 is one of only 11 known survivors (see sidebar, page 70) of what was once called the "Mosquito Fleet." Built quickly and in large numbers, the U.S. Navy's PT boats were a temporary means of deterring Japanese, German, and Italian aggression while the U.S. Navy was trying to recover from the devastation at Pearl Harbor.

During the war, cinema newsreels and patriotic films such as *They Were Expendable* glorified the mighty little PTs, which their crews sometimes called "plywood wonders." Americans came to think of the U.S. Navy's motor torpedo boats, designated as "PTs" for "patrol torpedo" boats, as the fighter planes of the seas. They became icons of America's "can-do" spirit. Pound for pound, PTs were the most heavily armed vessels in the war. The Mosquito Fleet sank 100 times its own weight in enemy shipping.

The Japanese called American PT boats "devil boats" for their speed and stealth as well as the courage



PT-658 is now a museum and monument, and in 2012 was named to the National Register of Historic Places.

and resolution of their crews. A PT boat rescued Gen. Douglas MacArthur from the Philippines. When the United States was trying to turn back the Japanese invasion of the Solomon Islands, PT boats out of bases such as Rendova Island worked with twin-engine, PBY "black cat" amphibious aircraft to coordinate night attacks on Japanese resupply barges as well as accomplish search-and-rescue missions for downed pilots, shipwrecked sailors, and Australian coast-watchers.

Maury Hooper, a veteran of PT-238 in the South Pacific, remembers being drafted into the Navy in 1944. His voice jumps an octave and his eyes start to twinkle as he tells his younger shipmates how he chased the dream of becoming a PT boater.

"It was a big war, a bad one.... I only finished the 10th grade, and I got drafted. There was a good chance that I would never come home to Tipton, Oklahoma,

American PT Boat Types

Elco

Of the four builders of PT boats in the United States during World War II, the Electric Launch Company (Elco) in Bayonne, New Jersey, built the most, at 326 boats. Elco's 80-footers were the longest built; many of these boats saw service in the South Pacific.

Higgins

Higgins Industries of New Orleans, Louisiana, produced 199 PT boats, all 78-footers. Higgins boats had the same displacement, beam, engines, horsepower, speed, armament, and crew accommodations as the Elco boats, but their deckhouses were set farther forward. At the start of the war, many Higgins boats went to the Soviet Union and Great Britain. Higgins boats also served in the South Pacific and Mediterranean, fought in the Battle for the Aleutian Islands, and participated in the D-Day invasion.

Huckins

Excluded from the original "Plywood Derby" design competition, the Huckins Yacht Corporation of Jacksonville, Florida, was a late arrival to PT-boat development, adding its patented planing "Quadraconic" hull and a unique laminated keel to the mix. Huckins built just two squadrons of 78'PT-boats during World War II. They were assigned to Hawaii, the Panama Canal, Miami, Florida, Midway Island, and the training facility in Melville, Rhode Island.

Vosper

Vosper & Co. of the United Kingdom arranged for boatyards in the U.S.—at City Island, New York; Annapolis, Maryland; Miami, and Los Angeles—to build 146 boats, all 70-footers of English design. They were never used by the U.S. Navy; most of them were shipped to Canada, Britain, Norway, and the Soviet Union.

again. So I figured if I had to go to war and maybe die, I wanted to do the most exciting thing I could. PT boats seemed like the place to be.... I loved the speed, so after boot camp I did everything I could think of to get orders to PT boat training in Melville, Rhode Island."

For Bud Case, another draftee from Minnesota, the job of being a "motormack" on PT-168 in places such as Borneo was no dream-come-true. "There's a reason why I'm deaf," he says. "After a patrol in the engineroom with those three Packards roaring away, you couldn't hear for two hours." But he says he still loved his time in PTs. "It was all about the other guys. The crew. They were the best. Just like these guys." He nods to the men gathered around him.

As if on cue, a burly volunteer climbs aboard the PT and says to Case, "Stand up, old man, and give me a hug."

The PT boats' origins date back to heavy-displacement vessels designed to carry torpedoes into naval combat preceding and during World War I. But the concept evolved exponentially during the 1920s and '30s. The U.S. Navy—following the lead of British, Italian, and French navies—began to conceive of high-speed attack boats built with planing hulls like the Gold Cup racers that captured the popular imagination during the Roaring Twenties.

The Electric Launch Company (Elco) of Bayonne, New Jersey, began testing a 70' design by British naval architect Hubert Scott-Paine. This design led to a race of prototypes off the east end of Long Island, New York, in 1941 dubbed the "Plywood Derby." The race, in turn, resulted in 74, 80'boats built by Elco, Higgins Industries, and Huckins Yacht Corporation that saw action with the U.S. Navy.

PT-658 is a Higgins-built boat. Like all World War II PT boats, 658's hull has a deep V at the bow, softening to a flat bottom at the stern. The shape bears a strong similarity to the planing hulls of pleasure boats still being built today. Sometimes mislabeled "plywood wonders," PTs were never built using much plywood; rather, they were planked in two layers of mahogany, varying in thickness from \%" to 1", on opposing diagonals and bonded with glue and a layer of canvas in between. A new PT boat could be completed in one to two months. The hulls were built upside down at Elco but right-side up at Higgins and Huckins. Frames are generally 1" × 5" spruce—some laminated, some sawn—on 12" to 16" centers. Keels are of loblolly pine. The hulls were fastened with bronze screws and copper rivets. Two laminated bilge stringers, about $4'' \times 9''$, ran the length of the hull for longitudinal strength. Two similar deck stringers mirror those in the bilge. The bulkheads, deckhouse, and furniture are generally ½" mahogany.

As in contemporary cold-molded yachts, PT-658's construction is light and strong, and the hull is easily repaired. Veterans involved with 658 love to tell stories of how they saw some PT boats endure severe battle damage and still float. The bow of future President John F. Kennedy's PT-109 floated for 12 hours after the boat was cut in half by a Japanese destroyer. Another PT boat returned to base safely after being holed port and starboard through the forepeak by a Japanese torpedo



Ron Taylor laminates a section of framing in place during major structural work over the winter of 2012-'13. During this phase of the restoration, 18 bottom frames, 200 linear feet of planking, the lower portion of a watertight bulkhead, and most of the starboard shaft log were replaced.

that didn't detonate against the light wooden hull.

At the heart of PT-658 and her sister Higgins, Elco, and Huckins boats are three Packard Marine, V-12, 48-valve, 2,490-cu-in engines with aluminum blocks. These engines started life as power plants in 1930s-era aircraft such as the Boeing TB torpedo bomber and the



U.S. Navy's PN flying boat. They were also a favorite of Gar Wood for his MISS AMERICA speedboats. PT-658's Packards are of the 5M-2500 model, and are fitted with gear-driven centrifugal superchargers and intercoolers. Each engine produces 1,850 hp at 2,500 rpm. The Packards have Holley aircraft-type carburetors, dual magneto ignition systems, and two spark plugs per cylinder. Each engine weighs 3,100 lbs. To say the least, such monsters, and their parts, are hard to find these days, and veteran motormacks such as Case and Hooper, as well as their younger shipmates, have been seeking out and buying up spares when they can to make sure that 658 will always be ready to run for open water.

Wally Boerger is one of the volunteers responsible for sourcing a lot of 658's guns, cannons, torpedoes, and depth charges during the restoration. He stalks the Web for all manner of PT-boat gear, and he networks with museums, arms dealers, junk collectors, and the

Fred Juras and Lowell Gillespie remove planking from the forward port side, winter 2012-'13.



Major deck work was accomplished during the 2009-'10 phase of the restoration. Here, the chart house has been cut loose and lifted so the deteriorated decking can be stripped away.

military. He likes to explain to visitors to the museum now being built in the boathouse that PTs such as 658 were periodically reconfigured for new missions. In the South Pacific, many of them were ordered to attack heavily armed enemy troop supply barges at night. They were also called upon to support troop landings and rescue downed pilots. For such missions PTs needed more firepower and improvised crews. Some even took 37mm cannons out of crashed P-39 fighters and adapted them as bow guns. These jury-rigged devil boats gave rise to purpose-built gunboat configurations for PT boats that did not carry torpedoes. "Ingenuity" was the watchword for the crews.

But as Case and Hooper like to say, not all their ingenuity was directed toward combat readiness. Hooper remembers July 4, 1945, when squadrons of PT boats in the Philippines gathered for races. "When I was fresh

out to the islands, I was on an old PT used as an aircraft crash boat for a while and an old motormack taught me a trick to bypass the governor on the engines that made them cut out at redline, 3,000 rpms. When our Higgins PT–238 got in that race, I told the skipper I knew this little trick. He told me to go for it, and after the race started we had those Packards turning over 3,300 rpm. Skipper told me to get out of that engineroom. Something could come apart. We went by those other boats like they were standing still. Covered 10 miles in 8 minutes, they say."

As PT-658's current crew tells it, the Higgins yard in New Orleans, Louisiana, laid the keel for 658 in February 1945 and launched her two months later. Designed in-house by Frank Higgins and Teddy Sprague, PT-658 was scheduled to be a "Lend-Leased" vessel and sent to the Soviet Union for deployment. But 658's orders were canceled by the

sudden end of hostilities with the Japanese on August 15, 1945, and the formal surrender on September 2.

PT-658 was already on a transport ship with three other boats headed for Russia when the Navy stopped the shipment, returned all four boats to Port Hueneme, California, and reclassified them as crash rescue boats. Some of these boats were used as remote-control targets for naval aviators, but 658 escaped being sunk. In 1958 the Navy sold 658 as "war surplus" to a private owner named Orlando Brown in Oakland, California. Brown wanted

to convert the 78′ combat vessel into a private pleasure craft. He renamed the boat DOLPHIN, and pulled out the gas-guzzling Packards and replaced them with much more economical GM 6–71 diesels. But after a few outings into San Francisco Bay, Brown realized that his war baby gave too rough a ride to ever be a yacht, and the boat languished at a wharf for more than 30 years.

In the 1980s a group of PT-boat admirers in Oregon who met at a veterans' reunion, acquired PT-659 with the intention of restoring her. But the old boat was in rough shape. As they were surveying 659 and reaching the conclusion that a thorough reconstruction would be needed, the former wartime skipper of PT-231, Ed Jepsen, discovered DOLPHIN in Oakland and called the guys in Oregon.

A dozen Oregon vets traveled down to San Francisco



Volunteer John Akin rolls on bottom paint before the relaunching of PT-658 in 2004.

Right—Sitting atop a barge being moved by the tug JIM MOORE, PT-658 relocates to Swan Island in 2004. Below right—With a fireboat saluting, PT-658 arrives at Swan Island where a crane will lower her to the water for the first time in 10 years.

Bay in 1992 to find 658 floating, but nearly forgotten, at a wharf in Oakland. The men formed Save the PT Boat, Inc. After a bit of wrangling, they worked a deal to take over the ownership of the old PT boat, as a gift from the late owner's estate. Finally, after many trips to Oakland, they had the hull stabilized enough to ship her to Portland.

But before they could complete arrangements to cradle their treasure and put it on a barge bound for Portland, a storm surprised San Francisco Bay and tore 658 from its dock, washing her ashore and driving one of the two rudderstocks up into the hull. Undaunted, the veterans, raced down from Portland. "We stood watch on her for three days," one of them said.

Drawing on wartime skills, he and his buddies put a temporary patch on the boat and refloated her. PT-658 finally arrived by barge at the Swan Island Marine Reserve Base in Portland in late September 1994, and restoration started in earnest. When the veterans

stripped off copper hull sheathing, which had been added by a previous owner, they discovered that their prize had a lot of deteriorated outer planking. A lumber company came to the rescue with cypress and mahogany. Many of the original dozen veterans and their growing following of volunteers were mechanically minded, with both metalworking and woodworking skills. But none had ever built or rebuilt a boat, so they partnered with Jim Lyons of Port Townsend Shipwrights on a full hull restoration. Veterans and volunteers replaced the deck with two layers of ½" marine plywood. Meanwhile, volunteer mechanics, led by a group of former PT boat motormacks that included Case and Hooper, rebuilt the gearbox and overhauled three donated engines.

Years passed. More volunteers joined to renew the efforts. Tom Cates came in 2003 to rewire the boat. Ron Taylor came to rebuild the transom and interior.





Losses

Of about 60,000 Americans who shipped out in PT boats during World War II, 331 died in combat.

Ninety-nine of 531 PT boats were lost to the following:

Accident, friendly fire, sea conditions	32
Scuttled	27
Naval mines	9
Rammed in combat	8
Strafing by aircraft	8
Enemy naval gunfire	7
Coast artillery	6
Kamikaze attack	2

As time went by, 658 began to look like a viable boat again, but more and more of the original dozen vets sailed on what they called their "last patrols." To preserve the "human history," volunteers began collecting audio and video interviews of the old guard's recollections of serving aboard a PT during the war.

"It wasn't a comfortable feeling going into a gunfight in a wooden boat with no armor protecting 3,000 gallons of aviation fuel," Frank LeSage, veteran of PT-205, told an interviewer. There were terrifying nights on patrol with "those green and orange things flying at you pretty quick."

He adds, "There were a hell of a lot of times you were scared to death." But the fear didn't really hit until after a battle. "When you're in combat you're pretty damn busy. Especially on a small boat like a PT. Every fella is looking after his buddy, and everybody is looking after the boat."

Years passed. Volunteers did more interviews with the veterans as the restoration of 658 inched forward.

Survivors

At the end of the war, many PT boats were stripped of their gear and burned to reduce the Navy's maintenance costs during peacetime. The boats consumed a tremendous amount of fuel for their size and were impractical for conversion to civilian use. Memories of witnessing over 120 boats burned on the beach at PT Base 17 at Samar Island in the Philippines still brings tears to the eye of veterans Hooper and Case. Some of the boats were sold as "war surplus," but few have survived.

Today, only PT-658 and 10 sisters are known to still exist in the United States:

PT-48

Possibly the last surviving 77' Elco PT boat, PREP TOM/DEUCE saw heavy combat in the Solomon Islands Campaign. The boat has the most distinguished service record of any of the surviving PT boats. When it was recovered in 2008, PT-48 had been cut down to 59' and used as a dinner cruise boat. Fleet Obsolete (www.fleet obsolete.org), a nonprofit organization based in Kingston, New York, dedicated to saving surviving PT boats, plans an eventual restoration.

PT-305

A veteran of combat against the Germans in the Mediterranean, 305 is a Higgins 78. When rescued for restoration, she was working planting oyster seed in Crisfield, Maryland. The National World War II Museum in New Orleans has nearly completed a full restoration, which can be viewed at its Kushner Restoration Pavilion. PT–305 is expected to be restored and certified to carry passengers on Lake Pontchartrain by 2017.

PT-309

A 78' Higgins, PT-309, nicknamed OH FRANKIE!, is another boat that sailed against the Germans in the Mediterranean. Fully restored, she is on static display at the National Museum of the Pacific War/Admiral Nimitz Museum in Fredericksburg, Texas.

PT-459

MAHOGANY MENACE is a Higgins 78' that saw action during the D-Day invasion of Normandy. The boat had been cut down to 65' and modified for sightseeing and fishing when Fleet Obsolete acquired her in 2008 for possible restoration.

PT-486

An 80' Elco, she served in a training squadron a Melville, Rhode Island, during the war. After being sold as surplus, she served until 2002 as SIGHTSEER and BIG BLUE out of Ottens Harbor in Wildwood, New Jersey. In 2012 Fleet Obsolete bought the boat for restoration.

PT-615

This 80' Elco was commissioned after World War II and never saw combat. After being sold into civilian service, she was converted as a yacht and was once leased to actor Clark Gable as TARBABY VI. The boat was serviced and stored by Elco for decades and is now in the hands of Fleet Obsolete.

PT-617

Another 80' Elco, 617 is fully restored and on display at the Battleship Cove Naval Museum in Fall River, Massachusetts. The boat is owned by PT Boats, Inc., an organization of World War II PT-boat veterans, head-quartered in Germantown, Tennessee. Portions of the hull are cut away to display the crew's quarters.

PT-657

Named MALAHINI, this Higgins 78 is still working as a charter fishing boat in San Diego, California.

PT-728

A Vosper boat built at the Annapolis Boat Yard in Maryland, she was modified in Key West, Florida, to resemble an 80' Elco. PT–728 was acquired by Fleet Obsolete to carry passengers for hire at Kingston, New York, and later, in 2012, by the Liberty Aircraft Museum of Port Clinton, Ohio, for further restoration.

PT-796

TAIL ENDER is a 78' Higgins. The boat served as a float during President John F. Kennedy's inaugural parade to represent PT–109, with some of the president's surviving crew aboard. Today, 796 is restored and on display at the Battleship Cove Naval Museum in Fall River, Massachusetts.



PT-658's restoration has been ongoing, and she is now armed, painted, and configured as designed. Torpedoes and other armament were installed in 2007.

"We suffered setbacks," said Wally Boerger, recalling the boat's grounding in the early 1990s and the fire in 2003. There was also a "little issue" with the bottom before the relaunch. After coating the planks with sprayed-on truck-bed liner to ward off moisture penetration, the crew discovered that the spray caused a destabilizing chemical reaction with the seam sealant. All the bed liner had to be ground off the hull. Meanwhile, the veterans in the crew had aged well into their 80s, and more left on their last patrols.

At last, on June 7, 2004, the crew of PT-658 relaunched their historic vessel into the Willamette River while a fireboat saluted with high, arcing streams of water and men sang "Anchors Aweigh." After the Higgins took to the water for the first time in 10 years,



PT-658's portside Packard V-12 engine is one of three that drive the boat at speeds up to 42 knots. The engines develop 1,850 hp each.

LeSage reflected. "We started working [on 658] just like we had been in the war together. It's the strangest sensation. A nice one."

One of his shipmates added, "We could have made a real good crew in World War II."

"We are a real good crew," said his friend.

It took six more years to acquire, rebuild, and mount most of 658's guns, torpedoes, and depth charges as well as add modern conveniences such as GPS. Younger volunteers filled in for the veterans, but the remaining old guard never lost touch with the project. For them, few things in life have been more fulfilling than the restored 658's maiden voyage.

"You sort of feel like you're young again," LeSage said after an outing aboard 658. At the boat's rechristening, he stood at a podium and offered a reflection to the crowd of well-wishers. "I suspect each one of us had his own reasons [for taking on this restoration]. Reliving his youth, hearing those three big Packards roar, standing on the deck of a fast-moving boat. Whatever our reasons, we were advised that it was an impossible task, that it would never run, much less float. Well, don't ever tell an old PT-boater it can't be done."

Randall Peffer is a regular contributor to WoodenBoat. His latest book is Where Divers Dare: The Hunt For The Last U-Boat.

Visit www.woodenboat.com/extended-content for a guide to further reading and research on the topic of PT boats.

For more information on PT-658, visit www.savetheptboatinc.com.



hen I first met with Kit Pingree, she was midway through a three-week haulout of her 78′ motor vessel, TEAL. Between forecasts of rain

showers, the first warmish days of the northwest spring had made an appearance, lending urgency to the varnishing and painting schedules and a long list of other tasks. Kit was on deck preparing TEAL's mizzen boom for a new steadying sail, which the boat hadn't had since its last days of government employment in the

"We're getting ready to go back to Alaska," Kit said with a smile, referring to her one-man crew and fiancée, Doug Tones, who could be heard somewhere on the ground attacking the rust on TEAL's 500-lb anchor with a needle gun. Adding to the yard's bustle and noise, shipwrights in Port Townsend spiled new Douglas-fir planks nearly 3" thick and muscled them into position over massive 10"-wide frames.

"There are six or seven bad planks that came from [the forests around] Mount St. Helens after she

erupted in 1980," Kit said. "Apparently, the trees got so hot that all the oils boiled out of the wood."

Inside of TEAL's large saloon, Kit showed me another small but significant project on the "to do" list: carving a pair of salmon. Old black-and-white photos of TEAL from the late 1920s show a pair of what appear to be 2'-long bronze salmon mounted port and starboard

on TEAL's bow. These fish were the mark of the United States Bureau of Fisheries patrol boats, among which TEAL was considered the "Queen of the Fleet."

Above—The 78'-long TEAL of 1927 motors through San Juan Channel just off the entrance to her home port of Friday Harbor, Washington. *Inset*—Kit Pingree, TEAL's owner and captain, bought the former fisheries patrol boat in 2008.

1960s.



Launched in 1927 at Kruse & Banks
Shipbuilding in North Bend, Oregon,
TEAL was commissioned to patrol the rich
Alaska fisheries starting in 1928 for the
federal Bureau of Fisheries, later the U.S.
Fish & Wildlife Service. She wintered on
Lake Union in Seattle, Washington, and
made annual voyages to the north. She
was first loaned, in 1955, then sold, in 1959,
to the State of Alaska and continued in
fisheries patrol service until the mid-1960s.

Although no longer a government workboat, TEAL's bronze salmon and her upcoming voyage represent two consistent themes in her nearly 90-year history: fish and the Alaskan coast.

Patrolling "the Territory"

Back in the 1920s, Alaska was a vast, roadless territory—statehood was still decades away. Anchorage, at the head of Cook Inlet, had a population of fewer than 2,000, and air service was minimal; most travel to and along the Alaskan coast was by boat. The Alaskan fishing fleet and the government agencies overseeing it were based largely out of Seattle, 1,500 miles away. In 1927, to better serve this extensive coastline, the government commissioned TEAL, a 140-ton motor vessel specifically designed for the job of monitoring and protecting the Alaskan fish stocks.

TEAL's design came from Seattle-based naval architects Leigh Hill Coolidge (1870–1959) and Harold Cornelius Hanson (1892–1975), who were design partners

for a year and a half starting in 1927. The boat was to be 78' on deck with a breadth of 18'6" and a draft of 8'7". Both designers were experienced in drawing commercial vessels and yachts. Hanson, in particular, became known for his contributions to the Northwest "trawler-yacht" style of motorboat. In the early 1920s, he worked for the Seattle yacht designer Ted

Geary, which may explain TEAL's elegant, yacht-like features—especially her fantail stern and graceful sheer. Coolidge was a native of Portland, Maine, who worked as a shipwright in Boston, Massachusetts, before heading to Puget Sound. He worked on the designs of schooners built in Ballard,

and his yacht commissions included the Blanchard 36' Standardized Cruiser, 24 of which were built between 1924 and 1930 as stock cruisers.

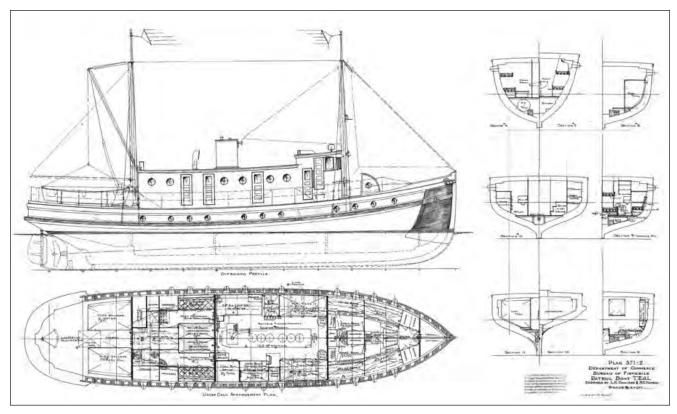
The contract to build TEAL went to Kruse & Banks Shipbuilding of North Bend, Oregon, on Coos Bay. Kruse & Banks was noted for building some of the last large West Coast schooners after World War I and later for building minesweepers during World War II in what historian Steve Priske has called one of the most productive shipbuilding regions in the United States.

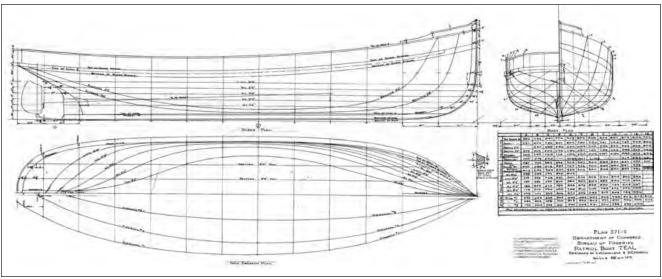
Although launched in 1927, TEAL didn't go north to Alaska until the following year, when she sailed in tandem with another Hanson-designed vessel, the 92' CRANE built in Port Blakely on Bainbridge Island, near Seattle. PELICAN, a sistership to TEAL, was built in Newport News, Virginia, in 1928; she initially served the East Coast fisheries but in 1941 was transported on a U.S. Navy ship to the West Coast to serve alongside CRANE and TEAL. All three of these Hanson-designed motorboats are still operating today—TEAL and



During her conversion for pleasure,
TEAL's wheelhouse and main
deckhouse retained their original
outboard profiles, but interior
modifications allowed two doors
on each side of the deckhouse to be
closed off.

CE HALABISK





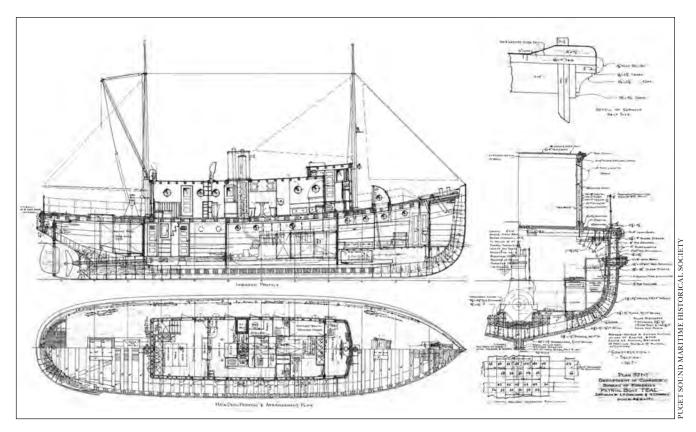
Top—The engineroom for the massive Washington-Estep 180-hp diesel engine, which was replaced in the 1990s, occupied roughly a third of TEAL's belowdecks space. Above—TEAL was designed by L.H. Coolidge and H.C. Hanson, two of the Northwest's most prominent naval architects of the early 20th century, during the mere year and a half that they were partners. Their lines plans show an elegant and seaworthy hull specifically designed to cruise the capricious Alaska coast. TEAL and other Alaska fisheries patrol boats inspired one Fish & Wildlife Service director to write that such boats "embody the best lines of the halibut schooner and purse seiner."

PELICAN as private yachts and CRANE as a fish packer in Alaska.

"Named for the wildfowl and big game animals they protect throughout the mighty northern empire of Alaska," remarked Frank W. Hynes, a Fish & Wildlife Service director in the 1940s, "these sturdy little vessels carry on a colorful and vitally important battle against

the forces of both man and nature to prevent the depletion of fish and game resources. They are strongly built and seaworthy, embodying the best lines of halibut schooner and purse seiner."

TEAL's principal mission was to patrol Alaska's Cook Inlet, but her responsibilities during 40 years of government service were broad and varied. Until the 1950s,



TEAL was built in North Bend, Oregon, a shipbuilding center where prized boatbuilding woods such as Douglas-fir, Sitka spruce, and Port Orford cedar were plentiful at the time of her construction. Her scantlings called for double-sawn frames on 20" centers, with paired 8"-thick futtocks in way of the engineroom and 5"-thick futtocks elsewhere. Her hull planking is 2^{5} %" thick, with $3\frac{1}{4}$ "-thick garboards. On the interior, her structure was powerfully reinforced with bilge stringers composed of seven $7\frac{1}{2}$ "-wide strakes $3\frac{3}{4}$ " thick.

she spent her winters at the Bureau of Fisheries base on Lake Union in the Fremont district of Seattle, during which time repairs and maintenance would be carried out. In early spring, TEAL would head north again, often in the company of CRANE and PELICAN or one of the agency's other vessels, carrying supplies for Alaska's remote communities and also government officials and fish biologists. Her duties in Alaska involved tagging herring, inspecting salmon spawning grounds, checking fishing licenses, and, in 1938, extensively surveying Prince William Sound streams. TEAL's logbooks show that in some years she covered more than 11,000 miles, implying multiple trips from Seattle to Alaska.

During World War II, TEAL and the other vessels of the Fish & Wildlife Service (which incorporated the BOF in 1940) were armed to patrol Alaska's coast against Japanese invasion. In 1962, to confront an invasion of another kind, Alaska Governor William Egan ordered TEAL to seize the Japanese fishing vessel OHTORI MARU, which was illegally taking halibut from Alaskan waters.

TEAL had a varied working career after being sold by the Alaska government in the mid-1960s. In 1997, she was bought for pleasure use and taken to Port Townsend, Washington, for a haulout and an extensive restoration.

George Shaw of Kenai, Alaska, who served as TEAL's engineer from 1953 to 1955 and is now 87 years old, fondly remembers his summers aboard TEAL when he was in his 20s. "We were a four-man crew: skipper, cook, engineer, and seaman. It was the best of all the boat jobs I had." Shaw was an engineer on ten or eleven vessels between 1944 and 1960, and on TEAL he managed the 180-hp six-cylinder Washington-Estep diesel. "To go from forward to reverse, the engine had to be shut down, a cam-shaft shifted, and then the engine



COURTESY OF KIT PINGREE





Above left—Since buying the boat in 2008, Kit Pingree has continued TEAL's maintenance and restoration. In 2016, the boat was hauled again at Port Townsend for additional work, mainly painting. Here, her 500-lb anchor is visible. Above right—In the latest haulout, a handful of planks needed replacement, exposing TEAL's heavy double-sawn frames.

restarted in reverse using a blast of compressed air. It didn't take more than a couple of minutes...." He specifically remembers installing TEAL's 54"-diameter, five-bladed propeller in 1954, the same propeller the boat carries today.

"TEAL was built for the Cook Inlet area and thus had large freshwater tanks due to the difficulty of getting water in the inlet," Shaw said. The tank capacity was 2,000 gallons.

In 1957, the federal government loaned TEAL to the Alaska Department of Fish and Game, and after Alaskan statehood in 1959 her ownership was transferred permanently. In the mid-1960s, TEAL was sold into private hands, which precipitated her

decline and nearly her demise.

Decline and Resurrection

After the state sold TEAL, she worked for a few years as a tug in southeast Alaska and then as a commercial fishing vessel. A May 1970 photograph from a Juneau newspaper shows TEAL

A belowdecks owner's stateroom provides ample and comfortable accommodations, using space formerly occupied by officer's quarters and part of the engineroom. She also has a double-bed guest stateroom, a "bunk room" with three single bunks and one double berth, and fair weather a double berth can be made up "under the stars" on the afterdeck.

aground on a rock, a telling image of her treatment during the next several decades. Victor Lundquist, a historian for the National Oceanic and Atmospheric Administration, wrote an account of TEAL's first 31 years of private ownership, listing a litany of owners and a steadily declining value. A 1982 classified advertisement from *The Seattle Times* reads, "M.V. TEAL—Just repossessed and to be sold as-is. Cabin rough, hull condition unknown. Min. Bid \$12,500."

In 1997, after being out of the water for 15 years, TEAL was brought back from the brink of perdition when she was purchased by Rod and Gayle Jones. The couple, with the help of Port Townsend shipwrights, undertook an extensive rebuild that took 25 months and cost an estimated \$750,000. "When the Joneses acquired TEAL," Lundquist wrote, "she was on blocks, badly deteriorated and nearly beyond saving."

The restoration used 16,000 board feet of clear old-growth Douglas-fir and cedar and included the replacement of 248 planks. "Every-

thing from the waterline up is brand-new on the hull," project foreman Paul Nelson told a *Peninsula Daily News* reporter on the day of her relaunching, July 13, 1999.

With the hull rebuilt, TEAL was floating again, but the Joneses continued the restoration on the water, followed by two subsequent owners. In 2000, a 350-hp Cummins 855 engine replaced the original Washington-Estep diesel. The 10,000 lbs of weight saved was replaced by concrete ballast, thus freeing up much of the engineroom for conversion to living and working space.

In 2004, TEAL was sold to Denny Mahoney of Anacortes, Washington, who finished the interior and made modifications to accommodate his son's wheelchair.



Mahoney also added a bow thruster and hydraulic steering. In 2008, Mahoney put TEAL up for sale. At a festival in Anacortes, he struck a deal with Kit Pingree, who offered 5 acres of land on San Juan Island in exchange for TEAL.

Return to Alaska

Under Kit's guardianship, the restoration of TEAL has continued. What George Shaw, the engineer, remembers of TEAL's accommodations was destroyed and then gutted during TEAL's years of abandonment. Originally, multiple cabins had individual access along the side decks. Now, a spacious saloon spans the breadth of the cabin from the wheelhouse aft to an enlarged galley. Kit, who is 68 years old and was married for 25 years to a finish carpenter from whom she picked up woodworking skills, designed and built some of the interior furniture in the style of the 1920s. She installed a heating system and a hydraulic crane. TEAL originally was rigged with a steadying sail, a rig Kit is restoring in conjunction with Port Townsend sailmaker Carol Hasse.

Kit, who grew up on and around wooden boats in San Francisco, moved to the San Juan Islands specifically with the idea of getting back into boating. "My father was an avid sailor and navigator," Kit said. While she was growing up, her family cruised on the Academe yawl GOLDEN BIRD, and the Mayflower ketch COURTSHIP.

For 10 years after moving to San Juan Island, she used her property for wedding receptions and vacation rentals. "It consumed all my summers," she said. Then came the opportunity to trade 5 acres of that land for TEAL.

"She has a way with people falling in love with her and emptying their pockets," Kit said, joking about the financial commitment necessary to keep TEAL running. "We haul out every three years and do a lot of the work ourselves." Doug's experience as an engineer at The Boeing Company has been put to use simplifying systems and troubleshooting problems. To save money, Kit buys fuel in bulk, taking advantage

Right top—TEAL's expansive main saloon was created during an earlier restoration by removing interior bulkheads that formerly divided the space into numerous small cabins to house marine biologists, game wardens, crew, and any number of eclectic passengers. Looking forward, the steps to starboard of the bulkhead lead up to the wheelhouse.

The railing guards other steps leading down to the owner's stateroom. Right center—The wellappointed galley spans the width of the deckhouse aft and is well lighted by the original 14" portlights. Right lower—In the main saloon (looking aft toward the galley), the living space includes furniture built by Kit Pingree herself, inspired by 1920s styling.

of a price break for purchasing more than 750 gallons. At a cruising speed of 8 knots, TEAL uses 2 gallons of diesel per hour, and she has a fuel capacity of 2,000 gallons.

Last year, Kit and Doug—both of whom have 100-ton master's licenses—took TEAL to Alaska and back, "3,224 miles," Doug said, after doing a bit of math, "...according to the logbook." That was Kit's second trip north in



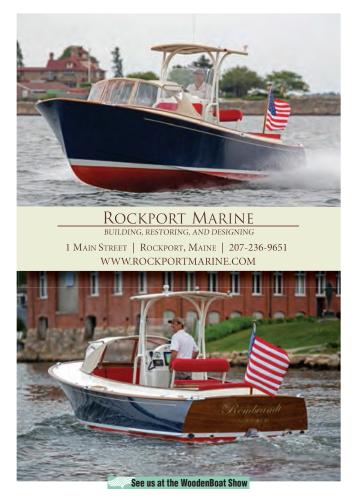




RUCE HALABISKY (ALL THIS PAGE)



Heading east out of Friday Harbor into San Juan Channel, TEAL sails waters that would have been familiar to her previous crews in her many trips north from Seattle to Alaska over the past 89 years. Her red stack is painted with the numerals "1927" to honor the year of her launching.



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In 2000, a 350-hp Cummins 855 diesel replaced TEAL's enormous Washington-Estep engine, saving 10,000 lbs of weight that was offset by additional ballast. Repowering opened space for accommodations but still left an ample engineroom.

TEAL, and shortly she and Doug will leave on another run up to Alaska, retracing a route the vessel has covered dozens of times

during the past 90 years. "People come up all the time and say, 'I remember this boat,'" Kit said.

Sometimes Kit and Doug cruise with friends aboard, but often it is just the two of them running the vessel. And Kit doesn't hesitate to take TEAL out on her own. "The first time I docked her by myself I had nightmares the night before. The previous owner, Denny, told me 'It's okay, she gets smaller," Kit said. "Now I can back her into a slip, and it's really kind of fun."

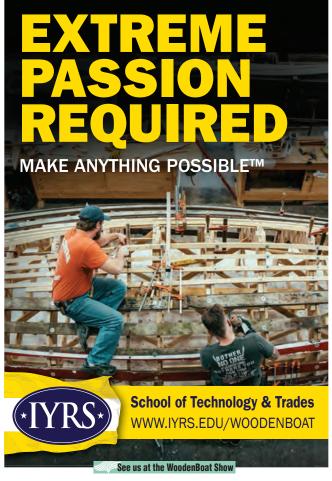
Recently, when backing out of the Travelift after the haulout in Port Townsend, "the bow thruster started up but then it died," Kit said. Doug ran below to troubleshoot. (The problem, discovered later, was an airlock from a recent filter change.) "It was blowing about 20 knots and I was committed (to making the turn)," Kit said. "Of course, everybody's watching from shore and yelling, 'Her bow thruster's gone." Kit kept her cool and patiently worked TEAL around to make the turn.

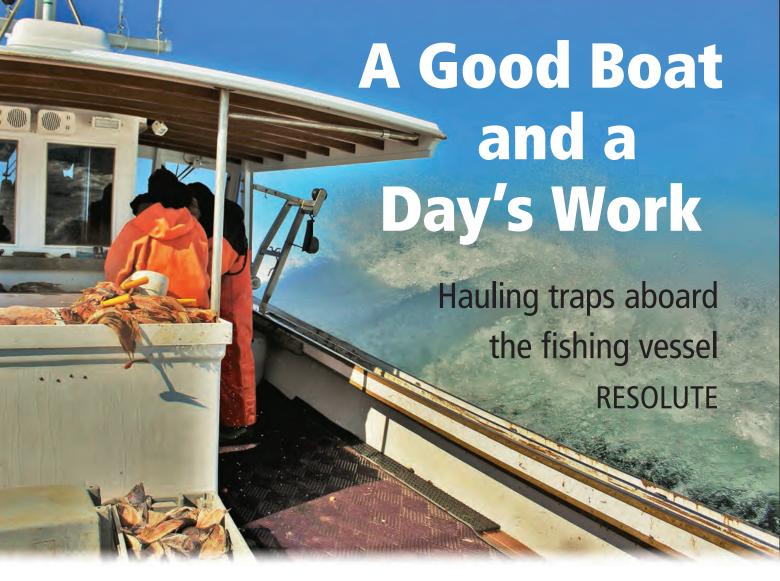
"The neat thing about TEAL is that she is so heavy you can put her in gear and 'pop' her, and she won't move forward but her stern will kick over—nothing happens fast," Kit says. "One thing I've learned is that I never run her hot, everything is slow and easy."

During my final conversation with Kit, she talked about the beauty of the Alaskan coast and the great fishing she and Doug experienced on their most recent voyage. They showed me a picture of the 97-lb halibut that nearly flipped their dinghy; they talked of the abundance of salmon they caught in secret coves and inlets along the way to last year's turn-around point at Glacier Bay. This year, they are planning to meet up with George Shaw in Juneau for his 88th birthday. Although no longer used to patrol fishing grounds, TEAL appears to have a secure place on Alaska's coast with Kit Pingree at the helm.

Bruce Halabisky is a wooden boat builder and frequent contributor to WoodenBoat. In 2015, he received the Ed Monk Memorial Scholarship from The Center for Wooden Boats in Seattle, Washington.







Photographs by Joel Woods · Introduction and captions by Brian Robbins

lthough the vast majority of lobsterboats now built in Maine are fiberglass-hulled, there are still fishermen who appreciate the feel of a wooden boat under their boots. And there are builders who appreciate working with oak timbers and cedar planks. Peter Buxton of Stonington has built a couple of boats to his own design for a repeat customer—which is a statement in itself. Bass Harbor's Richard Stanley has been building a hybrid combination of a wooden hull built to fit custom-molded fiberglass house and deck units for those who shy away from an all-wooden boat's yearly maintenance. And then there is Peter Kass and John's Bay Boat Company in South Bristol. Since opening for business in the fall of 1983, Peter (see WB No. 227) has remained true to his passion for wood, through both the good times and the lean times.

Early on, Kass boats were tagged as "Cadillac lobsterboats," a description that turned out to be a bit of a cross to bear.

"The 'Cadillac' tag was well-intentioned," Peter says,

"but it might have scared some customers away, thinking we were high-priced. The fact is, we've always been competitive price-wise when you compare one of ours to a custom-finished fiberglass boat."

A typical new-boat launching at Peter's yard is like a family reunion: John's Bay Boat owners usually turn out in force, showing their appreciation for Kass's work (see related article, page 86). They know there's more maintenance involved with a wooden boat, but to them it's a small price to pay. Take 39-year-old Ryan Larrabee, for example, and his two-year-old 46' John's Bay-built RESOLUTE. He says it was the idea of owning a boat that was "hand-crafted for me and what I wanted—every inch of it—instead of having something that was popped out of a mold."

Photographer Joel Woods spent an early April day with Ryan and his crew tending lobster gear aboard RESOLUTE and captured some of the highlights of a long workday. Put on your oilskins and come aboard for a day of tending traps in RESOLUTE.

Above—Spray flies as RESOLUTE, a lobsterboat from Stonington, Maine, breaks a sea on her starboard side. "She's unbelievably comfortable," says her owner-operator, Ryan Larrabee. "You can't beat the feel of a wooden boat."



In early spring, RESOLUTE typically leaves Stonington Harbor by 4 a.m. Ryan mans the helm from his captain's chair at the inner steering station of the split wheelhouse. He checks in with fellow fishermen on the VHF as RESOLUTE heads off to haul traps set approximately 15 miles beyond Mount Desert Rock—which lies 21 miles off the Maine Coast.

Ryan is surrounded by an array of electronics that includes a color sounding machine, chartplotter, radar, and GPS. He laughs at the technology available these days: "The

electronics we have now have made it easier than it used to be, for sure. Back in the day, lobstermen knew the bottom and could tell you all about where the shoals and deep holes were; now you have 3-D bottom machines that do it for you.

"I guess it's a good thing, but at the same time...I don't know. It's different. It wasn't that long ago that guys were running offshore just going by a compass course and marks off the land."

RESOLUTE was designed by her builder, Peter Kass, and measures 46' LOA and 15'3" across her beam. She draws 5'4". Hull construction is $1\frac{1}{4}$ " cedar planking over $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " oak frames on 10" centers.

In the early years of John's Bay Boat, Peter worked with the late designer Carroll Lowell. It wasn't until 1994, when the lobsterboat market began leaning toward beamier, bulkier hulls, that he drew up his own full-sized lobsterboat: a 41-footer for a Massachusetts customer.

"It was definitely what the market wanted at the time," Peter said. "And we were definitely behind the trend compared to the fiberglass guys—but we went with it. Guys wanted bigger engines and wanted to still be able to shove them far forward. If we were going to build boats, it's what we had to do. It seemed to work."

The lobsterboats built in the past few years have added another feature to the equation: larger belowdeck tanks to hold the catch. For a lobsterman, this translates to income; for a designer and

builder, this means extra weight to contend with.

RESOLUTE's 803-hp C18 Caterpillar diesel engine, fitted with a 2.5:1 reduction gear, spins a 36" × 42" four-blade propeller, pushing the boat along at a top speed of 23 knots—with an easy 17.5-knot cruise.





Ryan stands at the helm of RESOLUTE's outer steering station, approaching an end buoy. The lobster gear he and his two-man crew will be hauling on this particular day is rigged as 15-trap trawls with a marker buoy at each end. The control for the 14" hydraulic hauler is mounted on the bulkhead at Ryan's fingertips; the screens of the electronic equipment inside the wheelhouse are visible from where he's standing.

These traps have been set on bottom that runs from 500' to 600' deep, as that's where the lobsters seem to be at this point. In a few days—or a few weeks—the population may have moved, and there's no guarantee they will be in this same depth of water a year from now. Veteran lobstermen will tell you there are signs to watch for, trends to follow, and cycles within every season. And there are no guarantees. In the words of one longtime fisherman: "I spent 80 years tryin' to figger out lobsters and never did. I guess that's why I done all right at it."

Sternman Joe Sullivan leans out over RESOLUTE's rail to gaff a buoy as Ryan throttles the big Cat back and reaches for the trap-hauler control handle. Thus begins a flow of work that, when performed correctly, is as well-choreographed as a dance routine (although you probably wouldn't want to say that to the parties involved).

The rigging plays a factor, of course: Match the height of the davit block and the length of the rope beckets on the traps properly, and it will make breaking the gear in over the rail much easier.

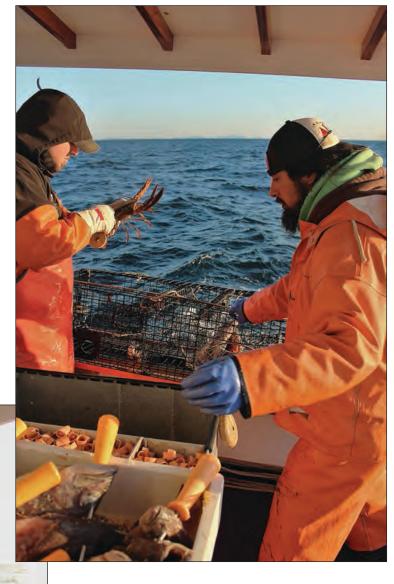
And then you have the men themselves. The old adage is, "If you find yourself doing nothing, then you must not be paying attention." A good man working the rail with the skipper is always mindful of the next trap coming up—and the next trap, and the next. And the man aft of him is also aware of the window of time they have to pick and bait a trap and move it aft before the next one is hauled aboard.

At the same time, every lobster trap is scanned for any chafed meshes in the twine heads or broken wire in the outer cage that needs to be repaired before re-setting it. A hole in a lobster trap is a hole in the wallet.

Sullivan and fellow crewman Keali'i Mano pick a trap clean on RESOLUTE's rail. (And in case you're wondering, no, Keali'i is not a typical Downeast name. He moved to Maine from Hawaii.) In the foreground, you can just see bait needles loaded with rockfish, which was trucked in, frozen, from the West Coast, that will be used for this day's trawls. Rockfish is typical of what some lobstermen call "hard bait": bigger fish that have been filleted, leaving a body with enough meat attached to last longer in traps set in the deeper water.

During the warmer months when lobsters tend to head for shallower depths to shed, herring will be the bait flavor of choice, stuffed into mesh bait bags. The herring typically doesn't last as long, but traps are also hauled on a tighter schedule with shorter sets.

On the outboard edge of the bait box is a tray of lobster bands, waiting to be slipped over the claws. These rubber bands became the norm in the 1970s, replacing whittled softwood plugs that used to be stuck into the soft membrane of the claw's "thumb" to prevent it from opening.



Joe sends a "snapper"—an undersize lobster—back overboard. With a bronze measure in one hand as he picks the trap, Joe ensures that all "keepers" meet the minimum (and maximum) carapace lengths required by Maine law. In the meantime, Ryan eases RESOLUTE's transmission in and out of gear, staying up on the groundline as the hauler winds in the trawl.

Barring any snarls in the gear, the ideal situation is to have the rope leading out away from the hull and angled just slightly ahead; each trap will trail slightly aft of the groundline as it breaks the water and rises toward the davit.

If the man on the rail can time his grab properly, he can make use of the trap's upward momentum as he swings it aboard. It isn't always a matter of muscle when it comes to handling lobster traps; rather, it's a feel for the constant motion of the boat and gear and using it to your advantage, rather than fighting against it.

Keali'i launches a trap over the side. As with everything else, there's an art to re-setting lobster gear: sloppiness can cost you money. A trap that lands upside-down will not fish properly. Lobstermen use various combinations of weight and runners (the skids on the bottoms of the traps) to help ensure they'll sink right-side up, but the man on the rail is the key to success.

At the same time, the man back aft needs to be conscious of the rope down by his feet—and with a 15-trap trawl, there's plenty of it. RESOLUTE is a steady workboat and Ryan a skilled captain who is always mindful of what's going on around him. But things can happen quickly on the water, and there aren't a lot of second chances.

Most lobstermen wear a sheathed knife that's easily accessible in an emergency. Old-timers often insisted on having a sharply honed knife jammed up under the rail in the aft corner of the boat's hauling side—the "last stop" if



a man had a turn of warp around his boot and was headed over the side. "You could do that with a wooden boat," says one veteran. "You can't stick a knife into one of them plastic boats."



Keali'i works his way down the starboard rail, setting a trawl back.

Vinyl-coated wire lobster traps first arrived on the scene in the 1970s to challenge the traditional wooden ones. You might wonder if a lobsterman with a wooden-boat soul wouldn't prefer to fish wooden traps, but the sad fact of the matter is, there just aren't any sawmills cutting trap stock these days. Most wire traps are built with enough custom touches to satisfy the average fisherman's need to make his gear his own

Take the color combinations of trap wire and heads (the twine, funnel-shaped entrances in the sides and interior) that are available, for instance: Whereas early wire traps of the 1970s and '80s were usually either black or dark green, today's are available in a wild rainbow of colors that includes bright yellows and blues—with twine heads that sometimes clash in the most garish of ways.

Some lobstermen will tell you that their particular combination of colors is the only one that will *really* fish, although their neighbors seem to be doing just fine with their own blend of colors. Others admit they simply like their gear to "look a little different."



There are fiberglass lobsterboats these days built in the same 46' range as RESOLUTE that are 2' (or more) wider, but for the boats he builds, Peter seems to have found a nice combination of above-deck workroom and belowdeck spaciousness in a hull that has a certain sleekness about it. One of the advantages of wood, of course, is the ability to tweak a design to fit a given customer's needs: Three boats in a row may have been birthed from the same basic design, but they might all be a little different.

OUTER FALL was the next lobsterboat built by John's Bay after RESOLUTE, and though she shared the same bloodlines, she was just a tad wider (15'6") and longer (47'). OUTER FALL's owner, Jim Tripp, told Peter he wanted something "a little bigger than, a little faster than, and just as comfortable as" the 42-footer the shop had built him in 1996. Kass jokes that Tripp just wanted to be able to say, "He's got the biggest John's Bay boat."



RESOLUTE is back at the dock, 12 hours or so after she left. Ryan and his crew have hauled 400 traps—half of the total he's allowed to fish by Maine law.

While some of his peers choose to stay out overnight and haul all their gear, Larrabee says he'd rather "put in a long day and sleep in my own bed at night, even if it costs a little more to do it." And there you have a facet of lobstering that is as old as the fishery itself: the balance between spending time out on the water to support the family and spending time with the family. It's a tough juggle at times, where shoreside occasions need to take a back seat to a profitable run of lobsters, or traps that need to be shifted before an impending storm.

Some lobstermen and their families master it; some struggle with the balance all their lives. There's nothing easy about this work. But it helps to have a good boat under your boots. Ask Ryan, and he'll tell you he does, for sure.

Joel Woods is a commercial fisherman who has worked in a number of fisheries along the East Coast. During his many years of fishing, he has learned to photograph the raw beauty and power of the sea.

Brian Robbins, a former offshore lobsterman, is senior contributing editor for Commercial Fisheries News. He lives in the midcoast Maine region with his wife, Felicity.



In August 2013, Peter Kass began building our lobsterboat, RESOLUTE. His shop, John's Bay Boat Company, is located at the end of Poor House Cove Road in the small town of South Bristol, Maine. A first visit to the place can be disorienting; in fact, you might think you are lost. A small wooden road sign is the only indication that you might be on the right track, and the narrow dirt road makes you pray that no one is coming from the other direction. A steep hill hides a workshop below, but at the end of the road, perched on the edge of Poor House Cove, sits the the birthplace of RESOLUTE.

We live two-and-a-half hours east of South Bristol, in Stonington. Peter is something of a legend here. Our small town has more Kass boats than any other, in use exclusively for commercial fishing. We were first introduced to John's Bay by one of my husband's mentors, John Williams, a fellow lobsterman. At the time, John was having his second John's Bay boat built, because his first one had reached 17 years of age and his wife, Judy, had surprised him by putting a deposit down for another. "He deserves it," she told me.

Peter launched John's beautiful KHRISTY MICHELLE in 2012, and up next was Ben Weed's EMMA AND ANDREW, launched in 2013. Ben was only 27 years old when his boat was launched, and he's part of a lovely trend of younger fishermen building wooden boats to extend their careers by reducing the toll commercial fishing can take on a body. I have been told by more than one that their Kass boat has saved them from knee or back surgery—common occurrences among fishermen. Most fishermen who work from wooden boats swear by the comfort of these hulls, which don't transmit engine vibration the way fiberglass ones do.

With the launching of EMMA AND ANDREW, our two-year wait was over. When construction of our boat began, we decided that we would visit the shop once a week to watch the progress. Our children were young, and we wanted the project to be a family affair. Our first visit, however, initially seemed underwhelming: The keel and the horn timber were in place, but little else suggested a boat. Then we discovered the framed-out transom, which was a little more exciting; it looked enormous compared to our tiny children,

Above—The 46' lobsterboat RESOLUTE stands ready for launching at John's Bay Boat Co. in May 2014. Ryan Larrabee and author Jennifer Eaton Larrabee await the moment with two of their children, champagne bottle at the ready.



With RESOLUTE's white oak keel rabbeted and notched to receive frame heels, the John's Bay crew erects the first few molds.

who ran excitedly through the shop touching everything—a wooden hammer that looked like a giant could use it, more clamps than I have ever seen, and chairs on wheels that my sons deemed appropriate for racing each other. In an effort to settle them down, I requested a photo. We stood by the horn timber, and I asked them to put their hands on it. As I began to snap a photo of little hands touching timber, I felt something for the first time. Our boat was coming to life: She was barely framed, but when those tiny hands piled on her she seemed to respond. I am not ashamed to admit that tears filled my eyes: We were touching the very thing that would carry us through the next stage of all of our lives, both physically and metaphorically.

very week we packed the car full of children and made our trek to South Bristol. Our only stop was a bakery at the midway mark, for cinnamon doughnuts and other baked goods for the shop crew: Jeff Hanley, the wiry young family man; Andy Dickens, the resident freshman who gets teased relentlessly (I am not sure he minds it, though); and Sam Jones, who has since partially retired.

Sam still holds a special place in my heart. He is the shop philosopher, and he explained to me the living being that a wooden boat can become. Every lunch

break the crew all gather around the woodstove in the center of the shop. Each lunch conversation begins with a good ribbing for Andy. It then progresses to stories about Jeff's wild young sons, to which we can relate. The meal almost always ends with words of wisdom from Sam.

This woodstove, smelling of cedar, was the backdrop for the poignant moment Sam measured my worth for owning such a prized vessel as the one we were building. He told me that trees are living beings. They give themselves to the builder, and come into the shop naked and without form. The builder pours every ounce of himself into these planks. He lays his hands on each inch of this boat, and lovingly bends and forms wood into a work of art. As he spoke, Sam paused to look directly at me, and only when I nodded my agreement did he continue.

The sweat from the brow of the builder fuels the boat and she responds, he said. They give to each other, the boat and the

builder. Then the day comes that the boat is complete. That day is only sad for the builder, he said, if she is going to an owner who cannot reciprocate the care the boat is willing to give. Her connection can be transferred to any owner who is capable of appreciating her. I am fortunate, he tells me, because Ryan has participated in the build. He has made his connection already, and he has passed Sam's test.

I was not confident that I had met Sam's measurements, but I knew I would try.

Weeks went by, and on every visit we observed more and more progress. Peter Kass himself taught my children how to mix epoxy and meticulously place each wooden bung in her hull. They will never forget that experience. Peter's interactions with our children made them love the vessel. His passion for boatbuilding poured into them as he patiently oversaw their haphazard work, directing them to take caution and align the grain of the bungs with that of the planks.

Sam and I decided to work together on the impossible job of choosing a name. My only requirement was that it reflect the work Ryan had done to achieve his dream of owning a John's Bay boat. I spent weeks poring over a book of historical boat names that Sam sent me. Sam later called me with what would be his final suggestion: RESOLUTE. It had been pre-approved by



RESOLUTE seemed to come to life as hands touched her timbers.

A lesson in setting bungs: RESOLUTE's construction was a family project, and everyone pitched in and learned during weekend visits to the shop.

Peter, which was not a requirement but we felt as though it should be. We unanimously decided that would be her name.

As RESOLUTE began to take her final form, her glowing maroon hull grew in beauty. We admired her more on each visit, and the anticipation began to build. The children had learned to climb aboard her on their own, on Peter's old ladder beside the woodstove, and they ran into the shop each week to measure progress for themselves. We admired their

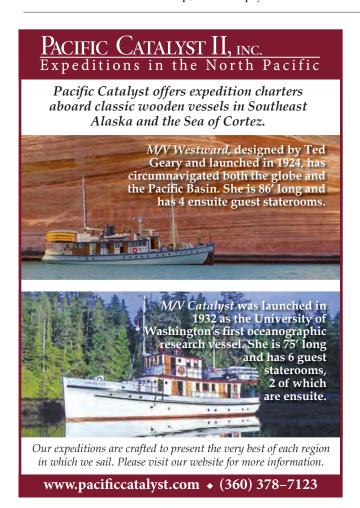
growing interest. One stood at the helm, pretending to steer into murky fog, while another pulled on imaginary lines to set her free from the dock and send her into dangerous seas. They rolled on rough oceans and ducked from sea spray. All the while I knew that RESOLUTE loved the children already. She knew who they were, and knew that this is how children celebrate their love for any vessel.

aunching day arrived. A torrential rain began that morning, dampening our excitement. The kids ran into the shop, now empty as our vessel



sat waiting for her freedom in the launching area outside. We all swept away cedar sawdust from the shop and created banquet tables using sawhorses and sheets of plywood—making them formal with table linens from the coveted collection of Nina Kass, Peter's wife. Former boat owners, friends, and family soon gathered at Poor House Cove to admire the newest member of our family. Keeping with tradition, the shop crew erected a set of wooden stairs next to the boat.

Visitors are allowed to inspect each boat before its launching, and everyone began to pour aboard. Comments and compliments flowed, and then the visitors





exited to enjoy the gourmet assortment of food that arrives, almost magically, at every John's Bay launching. Each lobsterboat captain brings the same dish every time: fresh doughnuts, smoked lobster dip, stuffed haddock, and seafood chowder, to name just a few.

At the precise moment, dictated by the tide, Peter motioned that launch time had arrived. As the multitude exited the shop, the heavy rain became a mist, and the sun began to peek through. The blessing of a boat is a brilliant tradition, and ours was given by the Rev. Ted Hoskins. "We are thankful that Ryan and Jennifer had the dream to build a boat, that they had the courage to do it, and that they had the wisdom to choose Peter Kass to build it with them." Ryan climbed on the bow and thanked those present. My husband is a fully self-made man. He has had mentors in his life, but has built his dreams with his own two hands. RESOLUTE, resting and ready for launch, was a true expression of this.

All other observers stepped off the boat, leaving only my children aboard with their father before RESOLUTE slid down the ways. Their excitement at the honor their father had bestowed on them, allowing them to be the only ones who would ride during the launch, was palpable. A gravity-powered launching is an impressive mastery of timing and physics. Peter gave me a nod and he pulled the lever to release the 46'vessel at the exact moment I christened the boat and, much like the birth

of a child, nature took over as 48,000 lbs of cedar and oak slid down the wooden ramp and into the waiting cove. The stern entered first, generating a sizable wave. I held my breath, waiting for the signal that everything was as we hoped it would be. The boat gave me the signal; she responded immediately, swinging her stern out on the captain's command. Their connection was instant and visible. A massive cheer erupted from the crowd, as though everyone present recognized the culmination of a dream fully realized.

As Ryan brought the boat alongside, I ran down to the dock, eager for the first ride. Family and necessary technicians were waiting, too, but my husband grabbed my hand first and pulled me aboard. As I watched my loved ones and our new family of builders climb aboard and set their feet on RESOLUTE's platform for the very first time, I felt a page turn in our life book. I watched Ryan laugh with pride, and Peter grin quietly at the success of another beautiful boat heading to Stonington. We had not come to the end of a build, but rather to a new beginning. It was a beginning filled with the promise of our family being protected by a safe and sturdy vessel, our new homeport in any storm.

Jennifer Eaton Larrabee is a freelance writer and a fisheries advocate who lives in Stonington, Maine, with her husband, commercial fisherman Ryan Larrabee, and their four children.



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Building Craftsmen, One Boat at a Time

The Great Lakes Boat Building School

by John Summers

If you drive north through southern Michigan, you'll eventually reach the majestic Straits of Mackinac. Crossing the 5-mile-long Mackinac Bridge into the Upper Peninsula—the "U.P."—you'll soon enter Cedarville, on the threshold of the picturesque Les Cheneaux Islands. The town's maritime museum tells the islands' story, reinforced by an annual wooden boat show in nearby Hessel. And if you take one more turn at Cedarville, down South Meridian Street, you'll shortly arrive at the lakefront campus of the Great Lakes Boat Building School (GLBBS).

In 2005, a group of local residents who appreciated the rich maritime and boating history of the area founded the school, hoping to expand the economic base in a way consistent with the area's heritage. The founders rallied support, and by 2006 they had hired a director, bought property, approved a design, and broken ground for construction. In 2007, they hired Patrick Mahon, then living in Port Townsend, Washington, to develop a nine-month curriculum. The building was dedicated that August. By September, the school had received its state license as a vocational school and

Boats are chosen for construction at Great Lakes Boat Building School based on the educational value they'll have for the students in the two-year program. The boats shown here represent the kind of variety found at the school. Left to right, they are a Paul Gartside-designed 19' traditional daysailer, a cold-molded Van Dam Cedarville 26'6" inboard runabout, and a Gartside 16'6" inboard workboat.



The GLBBS facility in Cedarville, Michigan, was completed in 2007 and the first classes started that September.

the first seven students arrived.

Now, eight years after that first class enrolled, more than 100 students have graduated and the school is seeking federal accreditation. The only vocational boatbuilding school on U.S.

inland waters, it has reintroduced regional maritime traditions and has brought together Great Lakes youths with a passion for boatbuilding but no way to train for a career without moving to a faraway seacoast. In effect, the school has become the "Midwest School of Wooden Boat Building."

he two-story-high main shop, amply lighted by large windows, is filled with the smells of

wood being cut, steamed, and shaped and the sounds of hand and power tools in use. Quiet discussions among groups of students reinforce an impression of concentration and focus. At each end, large doors lead outside. To one side, a second-floor mezzanine is used for lofting and small projects. A machinery room to the other side houses stationary power tools and stocks of wood. Chainfalls for hoisting and turning boats run on overhead beams. Down the center of the shop is a series of workbenches, with storage underneath, one assigned to each student. Two cats, Luna and Target, make themselves at home, napping beneath or on top of the benches or patrolling the building.

The projects are chosen for their value in developing well-rounded skills. During my visit last April, the boats in progress reflected a wide variety: a John Hacker-designed inboard runabout, a fiberglass fantail launch, a Phil Bolger-designed outboard fisherman's launch, a Paul Gartside-designed catboat, and two small flat-iron lapstrake skiffs. The welcome was warm, inviting, and a little eclectic. I was invited to stay for the students' weekly potluck dinner, where I learned that I really shouldn't miss bingo night at the Islander Bar in Hessel, a highlight of the off-season

social life. (After a shaky start, I came away with a base-ball cap and a Frisbee.)

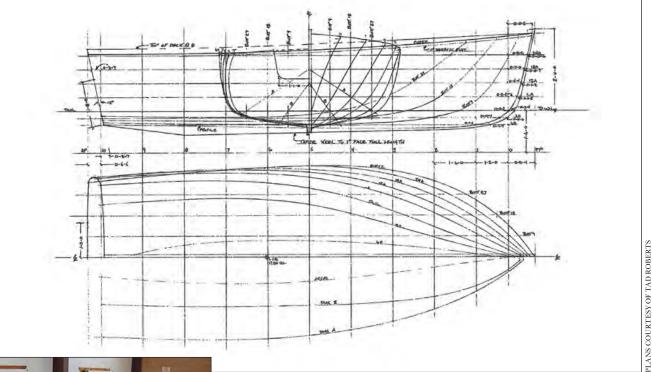
Pat Mahon, now the school's director, teaches the first-year program. Before coming to GLBBS, he served a ten-year stint at the Northwest School of Wooden Boat Building in Washington State (see WB No. 241), which was one of the primary inspirations for the GLBBS founders. Pat also drew from a wealth of experience gained during a long career as a boatbuilder. He grew up far from the water in Phoenix, Arizona, but was interested in boats nonetheless. After graduating from high school, he met a boatbuilder in Washington, D.C., who helped shape his career, and a year at Tough Brothers Boatyard on the upper Thames at Teddington, England, confirmed his choice. He went on to work for a decade at vards in Maine, then moved to Port Townsend, Washington, where he opened his own yacht joinery shop, and later turned to teaching. At the Port Hadlock school, he specialized in yacht interiors and contemporary construction.

Andy James, who teaches the second-year program at GLBBS, grew up with boats because his father owned a marina, and he has been a woodworker his whole life. But during his 24 years in the Navy, a transient life limited his boatbuilding projects to kayaks and other small craft. After retiring, he moved to Michigan and



Reconstructions of the 1923 John Hacker-designed Gentleman's Runabout Gold Cup racer MISS APBA have represented a fruitful collaboration in which the GLBBS second-year students build these complex hulls that are later finished

off by others. Lance Wilson of Runabout Restorations in Guntersville, Alabama, finished and outfitted two of the three hulls built at the school (inset), and another client is finishing the third boat himself. These partnerships keep the project's duration within the school's two-year limit. The first boat was lofted from lines and offsets published in *Motor Boating*. After studying the boat with school advisor Steve Van Dam, Pat Mahon redesigned the hull, following Hacker's plans above the chines but altering the bottom to reduce its rocker and to take some hollow out of the stern. This alteration recognized that today's engines are lighter than their 1920s counterparts. The first of these GLBBS-built runabouts, with an engine of more than 500 hp, reached 67 mph on sea trials, exceeding the owner's expectations.





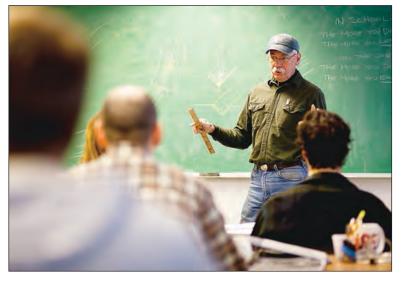
In a plywood-lapstrake outboard runabout drawn by yacht designer Tad Roberts of British Columbia, GLBBS instructor Andy James saw a boat that could be modified and enlarged to 18', with the designer's approval. The students worked with Andy to sort out the details on the lofting floor, which proved to be a good exercise. Students benefited from the process of altering the hull construction, using sheathed strip-planking instead of lapstrake plywood for the bottom and using sawn plywood frames instead of steambent ones to improve wear resistance on the trailer. The boat's appearance, however, with its plywood-lapstrake topsides, open cockpit, and simple windshield, is in line with the Great Lakes heritage of wooden runabouts.

began working with the Michigan Maritime Museum in South Haven. At a boat show, GLBBS staff saw a fiber-glass-hulled launch he converted to electric power and were impressed enough to ask him to join their teaching staff. Andy sold his recently completed "retirement"

house and moved north. He and his wife enjoy the close-knit feeling of Cedarville, and he confesses that he is "as much in love with the community as with the school."

The school has two vocational programs. A two-year plan is intended for career training in both traditional and modern wooden boat construction. A one-year program focuses mainly on traditional techniques, with a short introduction to wood-epoxy construction. In addition, one-week avocational courses are

held during the summers. All are meant to inspire students and to encourage their growth as craftsmen and craftswomen, and to shape their appreciation of maritime traditions. It is by no means guaranteed that all of the students who enter the GLBBS will emerge as



Pat Mahon developed the school's curriculum, which blends classroom instruction with hands-on experience. Pat, shown here at the blackboard, had a long career in boatbuilding before becoming a teacher.



boatbuilders. Some will graduate and go to work and do it well. For those who don't, it might be a matter of choice as other careers beckon. For others, it might be an acknowledgment that their skills are not what they thought they were. For others still, they may want to practice what they've learned as a pastime free from the constraints of doing it to make a living. For the 2016–17 academic year, eleven students were enrolled in the first-year program and four in the second year.

My day at the school, a fairly typical one, started in the morning when Pat gathered first-year students for an hourlong classroom presentation about wood-epoxy construction materials. Meanwhile, second-year students went straight to their projects on the shop floor. Pat says he likes to keep theoretical and practical learning in balance as topics emerge for students during

Andy James (in the foreground) teaches second-year students. A lifetime woodworker, he moved to Michigan after retiring from the Navy, and his work soon caught the attention of the school, which hired him to join the teaching staff. Under his guidance, students tackle sophisticated projects, such as MISS APBA, shown under construction here, that draw on the experience the students acquired in the first year.

Ken Workinger of Tiara Yachts in Holland, Michigan, designed the Challenge Mountain 20 for handicap-access sailing. He based the design on an earlier one by Fred Ford. The students cold-molded the hull of this simple, fin-keeled daysailer, using two layers of veneers set on opposing diagonals over strip-planking. The vacuum-bagging used for some components, notably the transom, gave the students valuable experience in modern boatbuilding techniques. The completed hull went to Irish Boat Shop in Harbor Springs for completion and outfitting.

their first year, the curriculum for which is based on his textbook *Learning Curves*, which he wrote for the school.

he choice of which boats to build is a complex one, balancing sometimes-competing priorities of the established curriculum, the arc of skills development, personal growth, institutional goals, and the market for completed boats. Unless a commission has been received, Pat usually doesn't decide what boat the first-year students will build until around Thanksgiving, when he's had a chance to get to know that year's class and their skills.

The school strives to prepare students for the realities of the workplace, and for the difference between learning a traditional trade and the stern reality of practicing it to earn a living. "I think the reality of building boats, and the perception of building boats, are miles apart," observes Steve Van Dam, who owns Van Dam Custom Boats in Boyne City, Michigan (see WB No. 195), and serves on the school's Program Advisory Committee. Pat, too, says a moment always comes in the first year when idealistic students realize that building wooden boats is hard work.

In the early days, a state law barred the school from selling completed boats, but a change in legislation now allows commissioned projects. Although they are





Built to William Atkin's much-admired Rescue Minor design of 1942 (see WB Nos. 189 and 215 and also Small Boats 2014), this launch was commissioned by a local island resident who specified electric power and furnished the system. Originally designed with heavy chine logs and sheer clamps, the construction was changed to plywood-epoxy, with glued-lapstrake topside planking. The hull, with its Seabright Skiff-style box garboard and V-shaped tunnel stern, was a good lofting exercise for the students, and the change in construction introduced contemporary techniques. She proved, however, to be under-powered.

well-constructed, the boats are student-built, which is recognized when setting prices comparatively low. "It would be nice to get more," Pat says. "Our boats are pretty good quality, maybe 80 percent of a professional yard. Sometimes the level of detail is not quite there. We have our time constraints and our skill constraints."

Commissioned projects provide much-needed revenue but can come with their own complexities. But as a school and not a boatbuilding shop, the institution recognizes that it can't charge hourly labor costs; Pat usually doubles the materials cost to set the price of a finished boat.

Commissions also have to fit the timelines and requirements of the curriculum. The goal is to select boats that can be finished within two academic years, which limits their length and displacement. The longest plank-on-frame boats undertaken to date have been a 28'6" whaleboat for Mystic Seaport, and a 32'gig for the USS Constitution Museum. The heaviest was a 5,200lb, 19'LOA Gartside-designed cutter completed in 2011. If a too-large boat were taken on, a student may end up learning only one aspect, such as planking, without getting a sense of the larger project.

Not all first-year students stay for a second year, but the boats often span both classes. With the imperative to develop students' skills, and taking into account other tasks they need to complete, even a small boat

such as the 12'6" Gartside catboat will be built over two years. About six months of each student's year are actually spent working on specific boats. Project boats are typically started and planked in the first year and fitted out and finished in the second. By working on boats in different phases of construction, students experience the complete sequence.

The school also occasionally adjusts to take on small projects as opportunities arise. This year, for example, students built a 36'-long yard for the Michigan Maritime Museum's sloop FRIENDS GOOD WILL and a complete set of spars for an owner-builder who didn't want to make his own. The spars for the Gartside catboat were deferred so that next year's class would still have a chance to learn sparmaking.

Boats, too, can be modified to suit owners, which introduces students to client relationships. The garboards of the Bolger launch, for example, were made in plywood instead of traditional solid planking because the boat will live on a trailer. While willing to make these kinds of changes where they are warranted, Pat



Students benefit from learning a variety of construction methods. Here, the shapely John Hacker-designed MISS APBA has been sheathed with its first layer of 6mm plywood set on the diagonal, to be followed by a longitudinal layer of %"-thick sapele. The topsides and deck were also cold-molded, but with 4mm plywood and 1/4"-thick sapele.



Like many resort areas, the Les Cheneaux Islands had local liveries, where boats could be rented for rowing and fishing. CHIPPEWA was one of them, built in 1905 in Cedarville by Hamel Brothers and now in the collection of the Les Cheneaux Maritime Museum. The school was commissioned to build a replica. At 14' long, with pleasing lines, a springy sheer, and tucked-up stern, it is a handsome, Whitehall-style small boat. Working from lines taken in 1990, first-year students built the boat in 2007 in place of one of the regular flat-bottomed skiffs. Although it turned out well, the skills required were deemed to be not a good fit with that phase of the program, so the experiment has not been repeated.

is not a fan of boats built with a hodgepodge of different methods. He prefers to stay more or less true to the boat's original tradition. For him, "the best tradition in wooden boat building is innovation...our goal here is to teach the skills, and I also emphasize a real appreciation of what's gone before in the history of boatbuilding." The Gartside cutter's deck substrate is made of glued-up plywood, which he considers appropriate, considering its advantages of structural stiffness, watertightness, and reduced maintenance. But if a customer wanted a traditional laid deck sheathed in canvas, he would be willing to do that, too, as an excellent learning opportunity for the students.

Students are involved in making choices about techniques and materials. Pat recognizes that everything is new to them, and although they may not yet have the background to understand the implications of each option, he encourages them to analyze alternatives. For example, he might have them calculate the relative merits of stainless-steel versus bronze fastenings in deciding the balance between a boat's cost and its potential sales price. Any aspect of construction can be a teaching opportunity. For teaching, he prefers building sailboats with some "heft." Large scantlings are more forgiving when shaped by those with emerging skills, and the challenges of sparmaking complement what students learn in hull construction.

Gartside's designs are especially ideal for teaching, Andy says. The plans are highly detailed, the boats are handsome, and their "big hunks of wood" are comparatively easy for novices to work with. Gartside's shapely hulls are also easy to plank.

One of Andy's favorite projects to date was a 16' lapstrake runabout drawn by British Columbia designer Tad Roberts and reminiscent of plywood-planked runabouts by inland builders such as Lyman, Thompson, and Chris-Craft. Andy had his students lengthen the design to 18' on the loft floor. For trailering, the hull's bottom was strip-planked from the keel to the turn of the bilge, then the planking transitioned to glued-lapstrake plywood for the topsides. Instead of using frames of steam-bent oak, the class installed sawn frames, and also bulkheads, of marine plywood. From a teacher's perspective, the boat had just enough brightwork and interior joinery to make it interesting, and its outboard power was simple to install, so the project introduced a range of lessons without being unduly complex.

Although he acknowledges that many students will go on to careers in repair, especially if they stay around the Great Lakes, Andy finds the subject difficult to fit in. Both he and Pat believe that the skills used in new construction are fundamental; if students can build wooden boats from scratch, then they will know how to repair and restore them. This year, the school has a higher-than-usual number of mid-career and second-career students who are interested in restoration, so they are exploring ways to add it to the curriculum. One disadvantage of such courses is that many hours may be spent stripping off old finishes and removing damaged structure, and, as Andy says, "That's not learning, that's just manual labor."

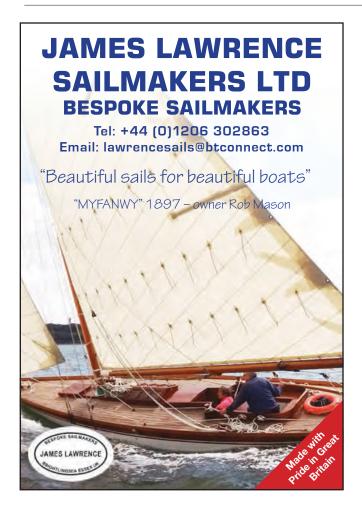
Andy is a firm believer in lofting. His students spend a lot of time not only drawing and fairing lines but learning how to use the lofting to develop such things as transoms, deckbeams, and stem sections so they understand how time invested in lofting can pay off later. They also take lines off existing boats. Local boat-yards may be experts in restoration, but far fewer have built new, so Andy believes the graduates could make an important contribution to local boatyard expertise.

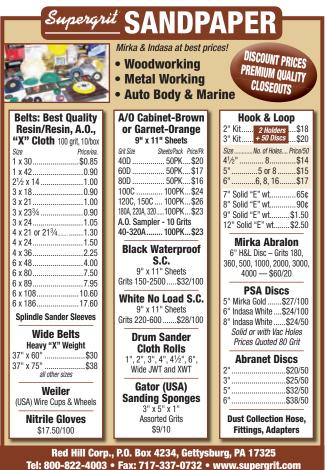
of backgrounds, with equally varying objectives. Much as a wooden boat is built from a large number of discrete parts that must not only function on their own but also work in concert with other components Pat Mahon chose to have students build this 20' LOA gaff-rigged pocket cruiser to Harry Bryan's Katie design (see WoodenBoat Magazine's Small Boats 2010). He reasoned that its heavy scantlings and traditional rig would make it a good project for first-year students and one that could be completed within the school's two-year schedule. The boat has no engine, which simplified the job and kept the finished boat's price low. Built on speculation by first-year students, she was started in 2013 and finished the next year.

around them, so too is a boatbuilder's education. First he picks up a chisel, possibly for the first time. Properly sharpened, it may be a revelation, inspiring confidence

in its capabilities on its own and in combination with other hand tools. Then reality is introduced, along with the clock, and the student learns when to work by hand and when to work with power, and how to blend the two to get a job done not only well but also on time.

Pat's challenge is to negotiate the balance between helping each student to develop as a person and improving the skills of all of them—to instill a sense of craftsmanship. He finds that maturity, skill, or attentiveness cannot easily be assumed by generational stereotypes: "I see young people just as focused as the older students, and likewise some older adults who seem to have exceptionally short attention spans. Sometimes the hardest students can be the middle-aged or older as they have developed bad habits and bigger egos. So you have to take each as an individual, coming in with different skills and experiences, and although I do not tailor the curriculum, I do adjust my expectations." He







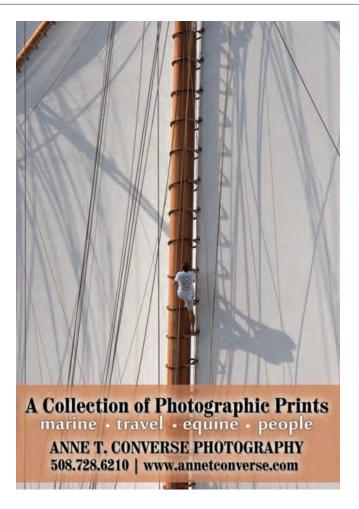
starts them all at the beginning and assumes that they have no experience in woodworking or boatbuilding. This approach has served him well. The only students for whom it doesn't work are those who come "already knowing everything there is to know," and he acknowledges that he has met (and tried to teach) some of them in his time at the school.

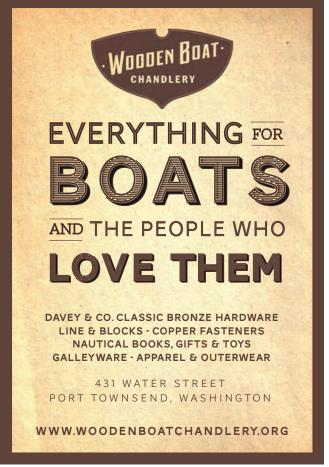
Discipline is an essential component of craftsmanship, Pat says. Young students can be in a hurry to go This 19' cutter designed by Paul Gartside is, at 5,200 lbs, the heaviest boat yet constructed by GLBBS. Launched in 2011 by second-year students, she's built of white cedar planking over a white oak backbone and steam-bent white oak frames. With her carvel planking, 2,200-lb ballast keel, Sitka-spruce spars, and stainless-steel hardware, the project gave students a solid grounding in traditional construction.

straight to the creative work, but he counsels them to be patient and learn traditions first. Creativity can be manifested in subtle ways; for example, an otherwise traditional boat can have sophisticated joinery that complements rather than upstages the rest of the project. He wants students to dis-

tinguish between a boat in which all the details flow together harmoniously and one in which the details are just good enough.

Building boats involves craftsmanship, artistry, and mechanical skills, and students need to learn how and when to shift between these. "Planking a boat is not real creative," Pat says. "It's pretty well been thought out. You're not going to invent a new way to plank a carvel boat. You have to do it in a very disciplined way. You







GLBBS instructors Pat Mahon and Andy James view lofting as an essential skill for boatbuilders, one that may sometimes be overlooked in boatyards primarily devoted to repair and restoration. Students loft the boats they build and also take lines off existing boats. Here, Pat works with students to loft a 12' catboat.

have to get through it and get it done properly."

Van Dam echoes this distinction. He has found it easier to find good mechanics to work in the production-boat sales and service side of his business than it is to find and find the time to train—craftsmen for the custom shop. Even after a year or two of boatbuilding school, his employees still must enter his company's four-year apprenticeship, with some credit for their previous training. For him, the essential ingredients are both natural aptitude and a fierce drive to create high-quality work. As a businessman, Van Dam is all too conscious of the need to balance exquisite craftsmanship with the need to get the work done. "In business...we have to get a product done in a reasonable amount of time even though we are known to be very detail-oriented. There's a threshold of pain for everybody, and you've still got to be efficient."

Teaching craftsmanship is a challenge when students have varying abilities, Andy says, especially when a student's aptitude is at odds with his perceptions of







The ability to take on difficult tasks such as measuring and cutting a stem rabbet pay off in tangible ways—an eye for a sheerline, an appreciation for detail, and an overarching ethos of craftsmanship.

his own skills. "There's a certain amount of God-given talent I think that you have. You can't just take anybody off the street. There's a certain amount of, 'You get it or you don't.' In the first year, they're learning how to use some hand tools for the first time. Some of them pick it up quickly and develop an eye for it and a feel for the wood, and others just never really get there." It is exciting to watch good students develop quickly, but not everyone is suited for every task. A mistake cutting a stem rabbet could waste considerable time already invested, so inevitably, for the good of the project, some students end up watching instead of doing.

An ethos of craftsmanship can be as hard to teach as it is to define precisely. For Pat, an artist has "the freedom...to imagine and create without the constraints of time, utility, value, beauty, or cultural acceptability.... The artist may work within a tradition and must know the history and techniques of that discipline, but he or she is ultimately guided by only one rule—there are no rules." Mechanics, by comparison, "know the rules and follow them." Like an artist, he says, a craftsman or craftswoman "has the freedom to be creative and



must, like the mechanic, 'know the rules' of his craft.... Unlike the artist, the craftsman is creating objects of utility and must be mindful of the user or of the client's needs and resources. The craftsman's work...is to create an object with a level of artistry that reflects a sensitivity to the history, the materials used, and the form and finish, while still maintaining the function or purpose of the object. A craftsman knows the rules and when and how to break them."

John Summers is a boatbuilder, small-craft historian, watercraft blogger, and museum curator who lives in Burlington, Ontario.

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WOOD TECHNOLOGY

Gluing Wood: Are Boats a Special Case?

The Wood Handbook published by the USDA Forest Products Laboratory states, "Welldesigned and well-made joints with any of the commonly used woodworking adhesives will retain their strength indefinitely if the moisture content of the wood does not exceed approximately 15 percent and if the temperature remains within the range of human comfort."

And therein lies the rub for boatbuilders: that troublesome 15 percent moisture content threshold. Of course, with modern epoxy coatings we can exclude the watery environment, but only with certain kinds of construction and careful attention to complete encapsulation.

For most watercraft construction, we have to assume that the moisture content of wood will, at times, exceed 15 percent and, further, that it will fluctuate, causing wood shrinkage and swelling. Woods with different densities will respond to moisture content variation in different ways, and within any single species radial, tangential, and longitudinal shrinkage and swelling will be different. Now add the following variables: (1) extractives in wood can alter the surface chemistry and affect glue bonds; (2) surfacing procedures before gluing, and the amount of time the prepared surface is exposed to air, can affect bond strength; and (3), most important, the temperature and moisture content of the wood will determine the viability of the adhesive bonding.

A recent email to WoodenBoat's senior editor Tom Jackson from Jim Stone of Stones Marine Timber in East Portlemouth, Devon, England, reads in part: "I contacted you recently saying how much I enjoyed the article in WoodenBoat, 'Unsettling Compression Set,' written by Richard Jagels. Today, I was discussing with Paul Gartside his thoughts on gluing Alaska yellow cedar. Paul's thoughts were very similar to mine. Although both of us are big fans of yellow cedar, we agreed that we had reservations on whether a joint, when glued, could be relied upon 100 percent. This prompted us both to ask the question, has any



research been carried out on this? If so, what are the best glues to use on vellow cedar?"

The simple answer would be to consult Table 9-1 of the Wood Handbook, which categorizes wood species "according to ease of bonding." The four categories in the table are: (a) bonds easily, (b) bonds well, (c) bonds satisfactorily, and (d) bonds with difficulty. These vague categories are further defined with the following footnotes for each category: (a) "bonds very easily with adhesives of a wide range of properties and under a wide range of bonding conditions; (b) bonds well with a fairly wide range of adhesives under moderately wide range of bonding conditions; (c) bonds satisfactorily with good-quality adhesives under wellcontrolled bonding conditions; (d) satisfactory results require careful selection of adhesives and very close control of bonding conditions; may require special surface treatment."

Alaska yellow cedar falls in category (c). But how do we define "good-quality adhesives" and "wellcontrolled bonding conditions"? Most of the laboratory tests were based on "animal, casein, starch, urea-formaldehyde and resorcinol-formaldehyde adhesives." If you plan to use an epoxy or polyvinyl acetate glue, you are basically on your own. And as the Wood Handbook notes, "a species that bonds poorly with one adhesive may develop much better bonds with another adhesive." For example, the tropical wood determa (*Ocotea rubra*), rated as category (a), bonds easily; yet a footnote states "difficult to bond phenol-formaldehyde." One other caution: Related wood species

In a simple glue-bond test, the sample at right (A) is ready for increased clamp pressure. The fractured sample at left (B) reveals a strong joint, since all the failure is in the wood, not in the glue line.

may have very different glue-bonding properties. Greenheart (Ocotea rodiei) is a member of the same genus as determa but is placed in category (d), meaning it bonds with difficulty.

Returning to yellow cedar, if I go to some other reference sources (mostly European), I find that most rate this wood as "easy" to glue. But then the questions arise: (1) what glues were tested and (2) was the wood tested from forests in western North America or from European plantations? Plantation wood growing on different soils might have different chemical extractives that could affect glue bonding. Finally, glue-bond testing rarely simulates all the conditions that boats encounter.

What to Do?

Faced with this kind of vague advice, I suggest doing your own testing. This is not as difficult as you might imagine, and it requires no specialized equipment. You just need to replicate conditions you normally encounter when building boats. First, the temperature should be the same as found in your boatshop—especially the coldest temperatures you might encounter during a construction. Use a familiar wood as a control species when testing an unknown wood.

Wood samples for testing can be quite small. (See the photograph above for a test configuration.) If you normally bond different woods together, test them as pairs. In all cases, replicate wood orientation. Two radial faces glued with parallel axes will generally show the least wood movement and yield the strongest joint after moisture cycling. Tangential-to-tangential faces will be next, while bonds involving grain at right angles will likely yield the weakest joints.

Following glue-up, using normal clamping pressure, allow a week of curing and then submerge the samples for

a few days in water at least as warm as normally expected in a boating environment. Beyond submergence, going through a few cycles of wetting and drying will yield even more realistic results. Test some wet and some after drying. Five to ten replicates will probably be enough to reveal bond strength.

To test the samples, place the arms of the glued sample in a vise or clamp, as in the piece labeled "A" in the photo, and close the vise or clamp until failure occurs. Examine the joint faces to determine whether failure occurred in the wood, which indicates that the joint is strong, or in the glue line, which indicates a weak joint. The sample labeled "B" in the photo shows a strong glue joint after fracturing. This simple test does not provide information about strength of various kinds of joints but will reveal how well an unknown wood compares with one or more previously used woods. It can also be used to compare two kinds of adhesives. Keep in mind that low-density woods are weaker than high-density species, and they are therefore more likely to pass the test, even if the physical and chemical properties of the bonding faces are identical in both cases.

Facing Reality

And this leads to the question: Just how strong does the glue joint need to be? Will it be backed with mechanical fastenings? How much water resistance is needed? For example, if the wood is intended for planking, will it be above or below the waterline? Will the glue joint need to flex, or will it be perfectly rigid? Will protection from water intrusion be well-maintained, for example keeping up the varnish on wooden spars? These are questions that need to be answered before choosing an adhesive. The following statement from the Wood Handbook gives us some sage advice: "There may be need for trade-offs between bonding requirements of adhesives and their resistance to stress, duration of load, and service environment. Adhesives that are the strongest, most rigid, and durable are generally those least tolerant of bonding conditions, including wood moisture content, surface roughness, cleanliness, inactivation, grain orientation, bondline thickness, and pressure and temperature of cure. Adhesives that are the weakest, least rigid, and least resistant to service conditions are those most tolerant of bonding conditions. Many adhesives are positioned between these extremes of bonding requirements and performance."

In the end, we need to recognize that joints in wooden boats are subject to wide extremes of moisture cycling and mechanical stresses that may require compromises or backup fastenings.

Dr. Richard Jagels is an emeritus professor of forest biology at the University of Maine, Orono. Please send correspondence to Dr. Jagels by mail to the care of WoodenBoat, or via e-mail to Senior Editor Tom Jackson, tom@woodenboat.com.



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AUNCHINGS

hese pages, along with the Boat Launchings section of www.woodenboat.com, are dedicated to sharing recently launched wooden boats built or restored by our readers. If you've launched a boat within the past year, please email us at launchings@woodenboat.com, or write us at Launchings, WoodenBoat, P.O. Box 78, Brooklin, ME 04616.

Please include the following information: (1) the boat's length and beam; (2) the name of its design class or type; (3) the names of the designer, builder, owner, and photographer; (4) your mailing address along with an email address or phone number; (5) the port or place of intended use; (6) date of launching; and (7) a few sentences describing the construction or restoration. (8) Send no more than five photographs (jpg images at 300 dpi) and enclose a SASE if you want anything returned.



On France's Lac de la Raviège, Bernard Le Poder sails INIS GWENVA (Breton for "island of light"), a Haven 121/2 sloop designed by Joel White. This is the third Haven that Bernard has built; he completed the other two in 1999. The 16' hull is strip-planked with western red cedar covered with fiberglass set in epoxy. The backbone and seats are of sipo. Plans are available from www.woodenboat.com.



Three alumni of WoodenBoat School showed off two new boats at the National Shellback Regatta at Crescent Yacht Club in Chaumont, New York. Chris Callahan launched his SWEET ANNIE (right) at the Nationals, and Jessica and Charles Dyson sailed in LITTLE DIPPER (left), which they'd launched a few weeks earlier. All three were students in Jeremy Gage's class in 2013. Order plans at www.woodenboatstore.com.

ECHO is the first François Vivier-designed Beniguet launched in the United States. Donald Stover spent nearly 4,000 hours on her plywood-and-epoxy construction before launching the 19'2" sloop near his Poland, Maine, home. He thanks the designer and Maine boatbuilder Clint Chase for their help with the project. Find plans at www.vivierboats.com.



William Wagner of International Falls, Minnesota, started with Glen-L's design for the Sissy-Do, a 13' flat-bottomed skiff, and turned it into a 13' double-ender. The hull is built from white oak and Douglas-fir plywood, coated with epoxy. William named his boat NORTH/SOUTH, one direction engraved on each breasthook, so he knows which way he's going. Plans are available at www.glen-l.com.



LITTLE JULIANA is a 24'10" Whitehall built at Rocking the Boat (www.rockingtheboat.org) in the Bronx, New York, last year. The apprentices had help from Alan Gilbert in lengthening the lines of a 20' Whitehall. Stevens Institute of Technology in Hoboken, New Jersey, which owns the boat and will exhibit it on campus, built a 1,500-lb replica steam engine to power it.

Daniele Giugliarelli of Rome, Italy, planned to build a boat for years before deciding on the Bette 500 kayak designed by Cristian Pilo (www.modernwoodenboat.com). He finished KAIMA last July after 10 months of construction. The stitch-and-glue hull is planked with okoume plywood covered with fiberglass set in epoxy. Daniele paddles KAIMA in Bracciano Lake, near Rome, and along Tuscany's coast.



COOKTESY OF HERITAGE
COAST SAILING AND ROWING

Heritage Coast Sailing and Rowing of Tawas City, Michigan, recently launched a strip-planked version of their Richard Pierce—designed Heritage-23 Mackinaw boat. Shortly after her launching, INDIGENOUS—the name chosen because of her local design and construction materials—competed in the Traditional Craft Regatta held in August 2015 on Tawas Bay. Contact davew@heritage-23.org for information on drawings and lapstrake kits.

About 20 years ago, Warren Gibbs, of Seattle, Washington, started building an M-14 Rapid Robert from a drift-boat kit made by Ray's River Dories (www.raysriverdories.com). The kit then sat for 16 years while Warren and his wife raised their children. Last March, Warren finished the 13'6" boat and launched it in Lake Washington. Warren has since taken the boat down the Yellowstone River in Montana.





Sheldon Hines of Concord, Massachusetts, bought the plans for a 7'7" Nutshell pram from The WoodenBoat Store in 2014. In June 2015, he took Wade Smith's "Fundamentals of Boatbuilding" class at WoodenBoat School, and though he had the pram nearly complete by then, he did "learn a few things that made it better." Sheldon launched his pram last October on White Pond near his home.

LAUNCHINGS



Dan Musser of Mackinac Island, Michigan, loves racing around the island on his new 16' Gentleman's runabout, built by Roman Barnwell. SEA SEA is the latest commissioned boat of Roman's new business, Barnwell Boatworks (www.barnwellboatworks.com). He spent 1,600 hours on the construction of the mahogany-and-marineplywood speedster. The plans by John Hacker and Nelson Zimmer are available from www.woodenboatstore.com.

Lary Kuhns of Homer, Alaska, started with plans for Renn Tolman's 21' Widebody skiff (www.tolmanskiffs.com) and extended the marineplywood hull to 24'. He also modified the cabin adding a beautifully crafted settee and innovative storage, including a wine cabinet and cigar humidor. THE K is powered by a Suzuki 150-hp, four-stroke outboard motor with fly-by-wire wireless helm. VanWhy Inlay & Design of Philadelphia inlaid the red abalone "K" on the transom.





Hiroshi Taguchi built this 41' cormorant fishing boat for Ichisaburo Sugiyama, one of only nine cormorant fishermen on the Nagara River in Japan. The boat has edge-nailed maki (Japanese umbrella pine) planking and no frames. She was launched last August in Gifu. As cormorant fishing is changing, Ichisaburo, the 18th generation of fishermen in his family, fishes only in front of tourists now, and Hiroshi is the last builder of these boats.

The Bayfield Maritime Museum in Bayfield, Wisconsin, recently built a reconstruction of a 15'6" herring skiff, copying an original built in 1941 by fisherman Cubby Lebel to fish the nearby Apostle Islands. Volunteers employed vintage tools and traditional techniques in building the replica. Josh Swan and Garry Couch took the lines from the original skiff, now owned by Robert Nelson. The new boat will be displayed at the museum.



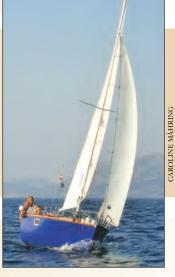


Gill Kronenburg was a housebuilder until he retired in Deltaville, Virginia, and started building boats. He considers building his 19'6" Glen-L (www.glen-l.com) Monaco runabout, WOOD DUCK, a project "more complex and satisfying than any other." The hull is cold-molded of meranti plywood, white oak, African and Canberra mahoganies, and fir plywood. Her Barr Marine 350-hp inboard gives her a maximum speed of 52 knots.



In December 2015, Moores Marine Yacht Center in Beaufort, North Carolina, relaunched GRACE, a 60' commuter built in 1913 by New York Yacht, Launch & Engine Company as SISPUD II. During her year's restoration at MMYC, the team replaced 80 percent of the keel, 40 floor timbers, and more than 30 planks, and rebuilt the engine and exhaust system. GRACE is owned by Palmetto Bluff, a private community in Bluffton, South Carolina.

Oscar Kravina of Tarvis, Italy, rescued this boat just before his uncle was to saw her into pieces. Oscar then spent two years restoring the 18'6" sloop, built sometime in the 1960s, and sold her to his friends Georg and Caroline Mähring who, with their two children, sailed it on a three-month cruise from northern Italy to Croatia, Montenegro, Albania, and Greece.





Henry B. Nevins built this Clinton Crane-designed 6-Meter-class yacht CLYTIE II in 1927. Around 2005, Scott and Melodie Lorraine started rebuilding her. When they got as far as they could, they sold her to Ken Welch. Ken, working with David Peterson of Wooden Tangent, and Cape Cod Shipbuilding, spent the next decade finishing the task and finally launched her at Mattapoisett, Massachusetts, last year.

In 1982, The Apprenticeshop, then in Rockport, Maine, built this 18' Chesapeake Bay sharpie from lines by Howard Chapelle. Gay Pearson, of Mussel Cove, Falmouth Foreside, Maine, bought her in 2008. BOSSA NOVA leaked badly for several years before Gay could restore her. Thomas Gregory of Freeport, Maine, did the workrepairing the keel, chine logs, and planking, and then refastening and refinishing the hull.



Hints for taking good photos of your boat

- 1. Set your camera for high-resolution images. We prefer jpg format, at 300 dpi minimum.
- 2. Stow fenders and extraneous gear out of the camera's view. Ensure the deck is clean and uncluttered.
- 3. Take your photographs in low-angle sunlight for best results. Early morning or late afternoon usually work well.
- 4. Keep the horizon level and the background simple and scenic so your boat stands out from its surroundings.
- Take some pictures of the boat underway and some at rest. Often a vertical format works well for sailboats. Shoot a lot of images, then send us your five favorites.

We enjoy learning of your work—it affirms the vitality of the wooden boat community. We receive so many submissions that there is not room in the magazine for all of them to be published. Launchings not printed in the magazine can be seen at www.woodenboat.com/ boat-launchings.



DESIGNS: SKETCHBOOK

"13"

A 16' scow sailboat for two

by Laurie McGowan

Dear Laurie,

When we vacation at a lake in upstate New York, my brother and I enjoy sailing together on his Sunfish. The boat is a lot of fun, but our combined weight, let's just say, is twice the boat's recommended crew capacity of 190 lbs. I think there would be a market for a similarly simple sailboat that two adults can enjoy together.

My idea is for a boat of about 16' with a basic one-sail rig. It would be strictly a daysailer, not intended for racing or camp-cruising—just a boat on which to have fun during an afternoon, and then easily and quickly put away. It would have a seating arrangement similar to an MC scow, making it more comfortable than a Hobie 16. It would have bilge boards to eliminate the aggravating centerboard trunk. The boat would have just one sail control—a mainsheet—and none of the MC's expensive, go-fast rigging. The boom would be high enough so that we could easily see and maneuver under it. The boat would be steered with a kick-up rudder. It would be easily righted after a capsize, so it would have a sealed cockpit. This is important: It would have a crew capacity of about 400 lbs.

I think a simple, easily sailed boat without a lot of complication and expense would bring some popularity back to a sport that seems to need it. Simple and fun boats shouldn't be just for kids.

Thank you, Steven Scott

Dear Steven:

Thank you for your letter. I can totally relate to your desire to have enjoyable sails with your brother, and know what you mean about not fitting into some of the available sailing dinghies. Few dinghies are made for big people.

I'll apologize here for not looking at your letter again until I'd completed my concept for the design. When I did reread your letter, I realized I'd overlooked an important requirement: that the boat be simple! Simple is a somewhat flexible term, though, and I think the boat I've come up with meets all of your other needs: It uses strip planking and has either a hollow wooden or carbon-fiber mast and a custom (and expensive) sail. I included a spinnaker—not for your needs, but to show that the boat could be racier with that sail. I just put my head down and totally got into the design, and the rig I've drawn, though simple in terms of its small number of moving parts, would be the definition of "go fast" due to the materials used. Fortunately, the mainsail may be easily changed to a more traditional shape, with short battens and simple panel layout, and the boat would still be a great performer.



The 16' scow "13" is meant to provide the same sporty experience as the ubiquitous Sunfish design, but to carry two—or even three—adults while doing so. The mandate was for a simple rig—a definition stretched by the designer as he explored this boat's potential.

I thought for a long time about the right hull shape, and then decided on a scow, as you mentioned. A few years ago I would not have chosen a scow, as I just didn't understand them. They just looked too weird at the time. It wasn't until watching a video of the singlehanded Mini Transat racing scow MAGNUM 747 by French designer-sailer David Raison that I finally saw what this hull shape can do on the water. Although looking like a bathtub forward, Raison's racer (co-designed



The extra-wide beam allows easy movement around the boat. There are hiking straps for a crew of three, plus handholds.

with François Lucas) won one race and came second in the next one—second due only to a rig problem. Last year's race might have seen another of Raison's scows win, but rudder trouble led to that boat's early retirement

I call this boat "13" because that's the number of versions it took to find the right balance between the hull

sides, bow, and bottom which, when heeled, results in a very sleek shape in the water. It's not a lyrical name, for sure, but I couldn't think of a pretty one for something that is so unusual-looking for most people. The number 13 is taboo for many people, and I'm guessing scows are as well.

Basically, scows move the heeled volume out to the edge of the boat, keeping it and the waterplane almost parallel to the direction of travel. There are some excellent videos online that show how important riding the edge of the hull is to having fun, and how fast scows can go. Unlike the modern fast racing dinghies, with their wide beams and extreme flares running the length of the boats (providing narrow waterplanes and hiking "wings" all the way to their transoms), scows want that outer edge in the water. In fact, the edge is the thing.

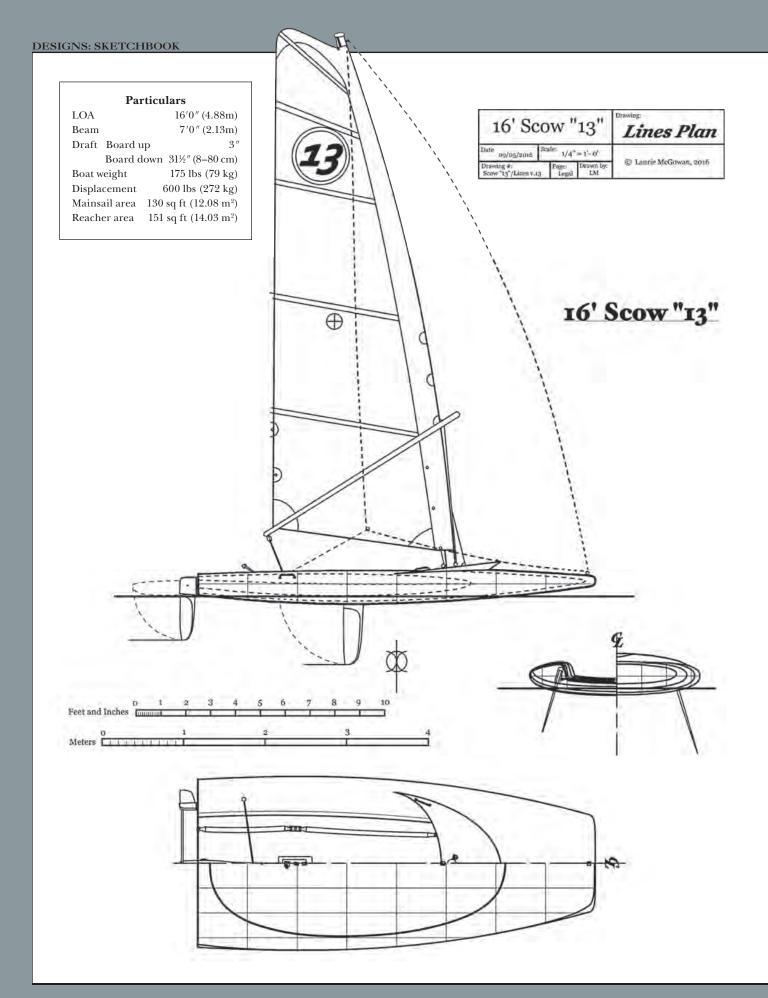
When heeled to 20 degrees, "13" presents a shape like that of a catamaran hull to the water, and the angled leeward bilge board becomes nearly vertical.

When you look at "13" heeled to 20 degrees, you can see that the submerged part almost looks like a catamaran hull, with its partner hull out of the water. To achieve a symmetrical shape of this submerged part the stern was widened more than on most scows and the curve in the turn of the bilge was lessened aft. You can really see how the bilge board is perfect here too, and also how good twin rudders, in line with the boards, can work. These blades can be significantly smaller than single ones on the centerline, as they are angled (to 17 degrees here) and will be nearly vertical in most conditions.

As with many scows, the bilgeboards may have asymmetrical sections, with the outboard faces almost flat, and the inner faces curved toward the centerline. This wing shape will help lift the hull to windward when the board is down. I don't know if a 3-degree toe-in of the boards (common on twin daggerboards on monohulls with regular bows) is needed here as the waterplane stays almost parallel to the centerline when this boat is heeled, while a regular boat's waterplane is at an angle to the centerline, from the bow traveling to the transom.

One other design feature is the squaring of the juncture of bow and sides as much as possible, to lengthen the waterline. The bow does not go down as it does on a regular boat when heeled; it just rolls to the side with









boom. A so-called "snotter" adjusts outhaul tension by changing the position of the forward end of the boom. Two reefs allow sailing in varying conditions.

The freestanding rig is powerful, with sail shape controlled by a wishbone

very little change in trim. Scows may have quite low bows because there is *so* much buoyancy forward. The curve of the hull sides becomes *almost* like the rocker of the bottom when heeled, and provides dynamic lift while sailing. The coaming forward will help divert smaller waves and wake from boats, and like on other scows provides an interesting break in the curve of the sides of the hull.

The rudder setup shown is common among wide offshore shorthanded racers, with two rudders connected by a rod athwartships and with a single tiller connected to the middle of that rod. Both rudders and bilgeboards swing up, and may be built of laminated ash and be in fiberglassed plywood trunks (or cassettes, for the rudders). Controls lead to the cockpit and are handy to the skipper and crew. The extra-wide beam will allow you to move around well on the boat, and for it to easily handle the weight of two or more heavier crew.

There are hiking straps for two or three people, and two handholds per side because the comfortably curved sided decks don't provide anything to hold on to when needed, especially when righting a flipped boat.

The freestanding rig is powerful yet easily controlled. The sleeved square-top sail is very efficient and the wishbone boom helps ensure good sail shape. The mainsheet may be led to one place, with the halyard and "snotter" line led to stoppers on the deck beside the base of the mast. The snotter controls the outhaul tension by pulling the forward part of the boom toward the mast, or by slacking off on that line. To reef the sail (usually done onshore) the snotter and boom need to be disconnected and the sail lowered to the appropriate opening at the front of the sleeve, where the snotter may be reconnected. Two reefs should ensure good control in a variety of winds. The spinnaker shown would be launched from a bag, with just the halyard, tackline,

and sheets required to control the sail. No sprit or pole is needed.

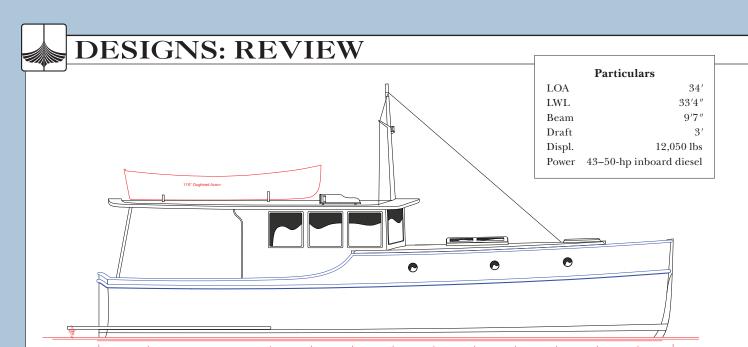
The wood, epoxy, and fiberglass construction is simple to describe. The hull bottom, deck edge, and foredeck are made of glued red- or white-cedar strips: ½6"(8mm) for the bottom, deck edge, and seats, and ½" (6mm) for the foredeck. The cockpit

sole is \%"(10mm) plywood, as are the uprights (which are tabbed to the hull, thereby acting like stringers on each side). There would be very little spiling of the strips needed with this shape. You'd be able to start planking from the centerline on the bottom, for example, and a foot or so from the deck edge you could mark a line parallel to the deck edge, for the length of the hull, and cut off already-applied strips to that line. The remaining strips would be installed parallel to the deck edge. The transom is ½" plywood (12mm) and the five bulkheads spaced evenly along the length of the boat, as well as the halyard control deck, are of %" plywood. The curved coaming is of three layers of ½" (4mm) cedar. There will be access ports in the cockpit uprights (near the centerboard controls), on the curved bulkhead at the forward end of the cockpit, and up on the bow. Buoyancy is ensured by isolating the areas under the seats and under the foredeck. Fiberglass cloth sheathing will be 6 oz everywhere, with 10 oz along the seats.

I hope "13" will be a very enjoyable boat to sail. I can imagine you and your brother, or any two good friends, finding that sailing groove in 10 to 15 knots of wind, where you ride the edge and find the perfect balance between you, the boat, and the wind and waves.

Laurie McGowan is a boat designer in Nova Scotia with a diverse on- and below-water work history; he specializes in energy-efficient commercial and pleasure boats. More of his work may be found at www.mcgowanmarinedesign.com.

Do you have a boat concept you'd like to see Laurie McGowan develop on these pages? If so, send it to Sketchbook, WoodenBoat Publications, P.O. Box 78, Brooklin, ME 04616, or email it to sketchbook@woodenboat.com. Your letter should be no longer than 500 words.



Yellow Cedar 34

A powerboat for two eras

hundred years ago, powerboats

had already been around for about a hundred years. After Robert Fulton installed a steam engine in his riverboat CLERMONT in 1807, constant developments created ever-smaller and lighter engines installed in ever-smaller craft until, in the early years of the 20th century, small boats driven by internal-combustion engines were fairly commonplace. By the 1920s, they were affordable enough to allow access to power yachting by the burgeoning middle class. Unlike the luxurious steam yachts of earlier years, these new power yachts exhibited moderation in all respects, reflecting the values of their owners, for whom getting the family out on

cost was paramount.

The new affordable power yacht was an example of substance over style. Shelter from the elements was a high priority, allowing families space to spend the weekend comfortably in a cottage on the water. A

the water in simple comfort at low

sensible and sturdy hull was key for safe enjoyment of their time afloat. And efficient operation allowed hard-won leisure time, and dollars, to stretch farther.

Efficiency drove the shapes of these yachts. A hundred years ago, even internal-combustion engines, although hugely improved in comparison to early steam engines, still didn't provide sufficient power density to drive hulls to climb out of the water and plane on its surface. In those days, there was really only one path to high speed, and that was hull length. The speed demons of the day were long, narrow, and light-often with length-to-beam ratios of six-, eight-, and even ten-to-one, with the middle of the yacht filled to bursting with power plant and fuel. The cost of building a long and light hull was untenable for a practical family cruiser, so speeds were perforce limited. The light, beamy, and speedy planing power cruiser lay years in the future, awaiting lighter-weight engines of more power. In the early

Design by Tad Roberts

Commentary by Robert W. Stephens

20th century, efficient cruisers counted on low-power engines and hulls that operated efficiently at displacement speeds.

Tad Roberts' Yellow Cedar 34 takes us back to the power yachts of a hundred years ago, and the same virtues that appealed to the middle class then should resonate with a newly beleaguered middle class today. She's attractive, roomy, and efficient, and allows—demands, in fact—a return to a less frenetically paced way of vacationing.

Drawing inspiration from boats of Roberts' native Pacific Northwest such as the Lake Union Dreamboats and their cousins built by Blanchard Boat Company and Lake Union Drydock in the Seattle area, Yellow Cedar features a distinctive raised-deck profile. It's hard to improve upon this style of sheerline for ease of construction, sturdiness, and interior volume—the high freeboard forward means the complex structure of a cabin trunk can be dispensed with, eliminating labor hours from

Above—Yellow Cedar 34, designed by Tad Roberts, harks back to the power yachts of a hundred years ago. She's good-looking and roomy, and invites cruising at a steady, unhurried pace.

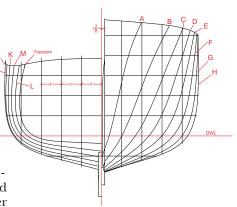
construction and weak joints from the structure. Standing headroom is achieved under the full-width deckbeams, along with a spacious feel below. A wide and uncluttered foredeck results, with ventilation and light supplied through a simply built and traditionally attractive butterfly skylight on deck and hull ports through the topsides. And the broken sheer with a sweeping ogee connecting the raised foredeck to the lower washrails around the cockpit is gorgeously salty and attractive.

Roberts has included a well deck just abaft the stem "as a handy spot to store anchors, rope, fenders, etc." The recessed deck and raised bulwarks thus created serve to make anchoring more secure for the foredeck crew and also to contain the inevitable mud and grit that comes aboard when weighing anchor.

One look at the lines profile and we'll recognize the lineage of Yellow Cedar: She is clearly and unalterably a displacement hull. The buttocks and rabbet rise at a steep angle from amidships to the transom, indicating that she can never be pushed faster than "hull speed"—about one-and-a-third times the square root of the waterline length, which in Yellow Cedar's case is about 8 knots. In fact she will see her best efficiency running at about 5½ to 6 knots, where the bow and stern waves will remain at manageable

sizes while the horsepower requirements remain small. Roberts specifies a diesel engine of 40–50 hp, but at cruising speed the hull will require only a small fraction of that power. Roberts predicts a fuel burn of about 3 quarts per hour, or about 8 miles per gallon—pretty good for taking your home along with you. An equivalent modern planing powerboat would be equipped with about ten times the power and would be lucky to achieve one-eighth the fuel economy. True, you could go three or four times farther in a day, but Yellow Cedar

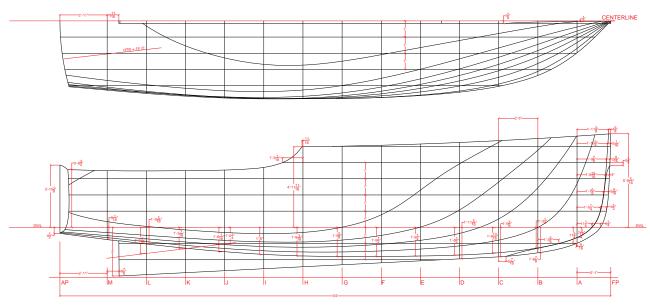
with about ten times the power and would be lucky to achieve oneeighth the fuel economy. True, you could go three or four times farther in a day, but Yellow Cedar will take you 25 or 30 miles in that same time, and she'll do it smoothly and nearly silently. Her only vice will be that of her forebears: She's a narrow, round-bottomed boat, and is thus prone to rolling in the right conditions. Yellow Cedar will be better-mannered than some of her ancestors, however, due to her proportionally lower center of gravity (a result of her lighter displacement), but Roberts suggests adding bilge keels for owners who expect to venture into waters less protected from ocean swells. For all of us, it's important to remember that, like her ancestors, Yellow Cedar is a sheltered-water boat. That said, Roberts tells us, "many [similar boats] have been north from Puget Sound into

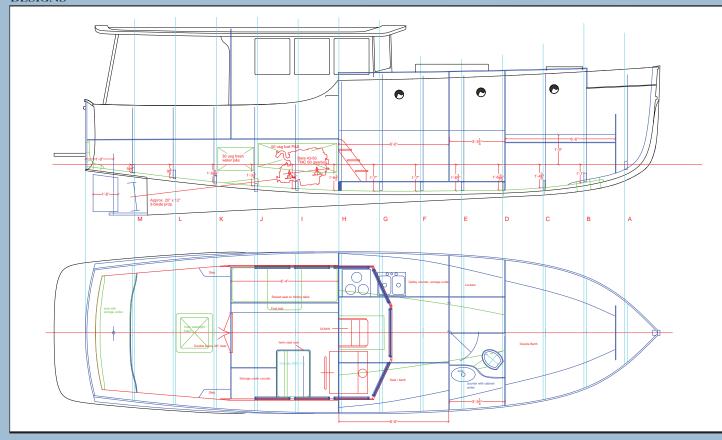


Above—Yellow Cedar is decidedly a displacement hull. She has ample interior volume, and her high freeboard eliminates the need for a cabin trunk. Below—With her buttocks and rabbet lines rising at a steep angle from amidships to the transom, The boat can't be pushed past her hull speed of about 8 knots. The designer estimates her fuel economy at 8 miles per gallon—and she'll make those miles running nearly silently.

the Alaskan Panhandle, but they are not open-ocean cruisers."

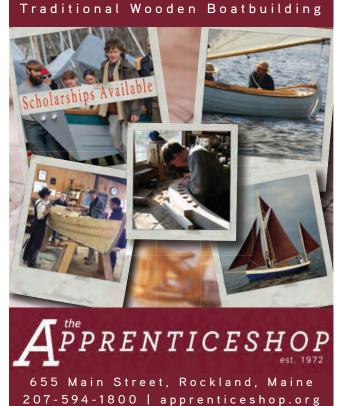
The heart of the boat's accommodations is not belowdeck at all, but is sheltered under the no-nonsense hardtop. Roberts explains, "Here in the Pacific Northwest it rains a lot, and it's cool even on summer evenings, so protection is appreciated year round." The deck saloon is an











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indoor-outdoor space that's continuous from the stern rail through the pilothouse all the way to the open companionway, through which you step down to the lower galley. A solid hardtop provides reliable protection from sun and rain, as well as a sturdy place to hang simple canvas side curtains. In fine weather the after portion can be open to the breeze, but in inclement weather curtains can enclose the entire area. In New England and Southern waters, protection would be similarly appreciated from biting insects. The deck saloon includes open space aft—I can imagine populating this with modern weatherproof "wicker" fur-

Left—Yellow Cedar's hardtop is the heart of her accommodations; it shelters an indoor-outdoor space running from the stern rail to the open companionway. Canvas side curtains will increase the hardtop's protection.

niture—and a fixed settee and bar/counter area along with a comfortable helm position. A wide companionway links the straightforward galley to a lower sitting area. This arrangement is wonderfully airy and open; the only concern is how one would secure the boat in a community prone to maritime theft.

Both the upper and lower settees could be rigged as pull-out double berths, and along with the master stateroom forward could provide sleeping accommodations for as many as six, plus, as Roberts points out, more on air mattresses on the cockpit sole. However, she'll serve best with a smaller crew—a family of four or two couples will be a pleasant ship's company.

Yellow Cedar's construction differs from boats of a hundred years ago, and the difference is a welcome one to the home builder and maintainer. She is strip-planked over laminated frames set on about 32" centers; no temporary molds are needed to support the 1"-thick cedar strips. A substantial exterior sheathing of fiberglass and epoxy provides a tough and durable outer skin and ensures dimensional stability, so we don't need to worry about drying out in the off season. Leaky seams are a thing of the past, as is concern for worm damage. There's nothing esoteric about how she goes together, and it's all well within the means of an ambitious amateur. Roberts includes full-sized patterns for all major components to ease the path.

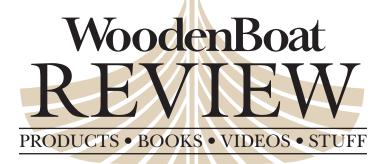
Perhaps it's time that we look back to see how we can embrace a style of yachting that allowed people of an earlier generation to enjoy the water on a modest budget, so that we can continue to enjoy cruising, but with a clearer conscience.

Bob Stephens is a principal at Stephens Waring Yacht Design in Belfast, Maine.









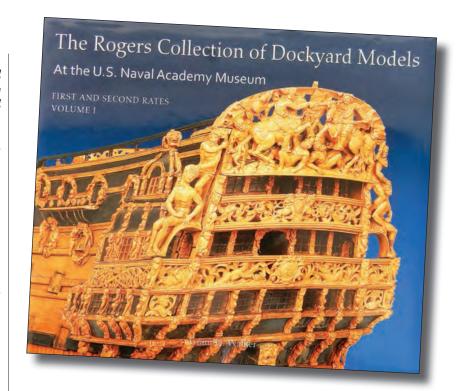
The Rogers Collection of Dockyard Models at the U.S. Naval Academy Museum

Reviewed by Tom Jackson

The Rogers Collection of Dockyard Models at the U.S. Naval Academy Museum—Volume 1: First and Second Rates, by Grant H. Walker. SeaWatch Books, 19 Sea Watch Pl., Florence, OR 97439; seawatchbooks.com. Hardcover, wide format, photographs, some plans, five appendices, index, 226 pp. ISBN 978-09904041-7-0.

Something about well-conceived and beautifully executed ship models demands a close look, which is precisely what Grant H. Walker has done with his new book—the first of what promises to be a several-volume series on his subject. Walker for 25 years has been the director of the United States Naval Academy Museum at Annapolis, Maryland, and among the most spectacular objects in that collection are some of the greatest ship models in existence.

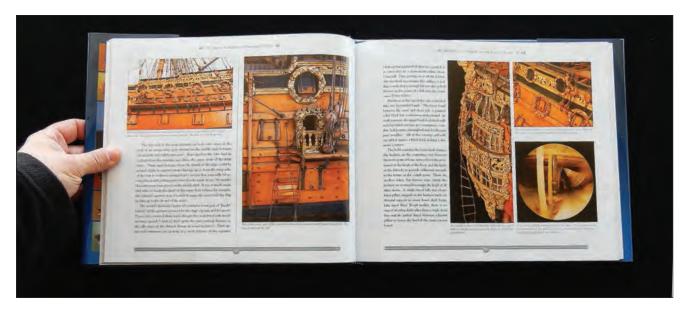
Some may find it ironic that the most treasured models in an American Naval institution would represent British warships. The twist of history came after World War I, when wealthy American collectors found ready, though reluctant, sellers among English estate owners



much reduced by the war. One of these was Colonel Huddleston Rogers of Southampton, New York, heir to an enormous Standard Oil fortune. He was an artillery officer with a long-held interest in warship models, starting with those made of bone by prisoners of war during Napoleonic times. Over his lifetime, he collected nearly 100 models, all of which he left to the

Naval Academy in his will. This volume compiles everything Walker has learned about seven models of first- and second-rate ships of the line from the height of British naval power during the Age of Sail.

If there is a temptation to call these warships "glorious," it's because they are. The oldest ones have gold-leafed baroque embellishments and carvings that are



gaudy and over-the-top by modern standards. But warships, then and now, are meant to project power, and the resources devoted to their creation have always been lavish, putting them on the cutting edge of the science of naval architecture and meant to make an impression. But there's much more than a fascination with military affairs in these models.

Above all, ship construction and its changes through time are closely documented in miniature hulls—which are not so small really; a typical scale was 1:48, making the models 40" or so on deck, a size that would never seem small even in an English estate. Some four dozen of the models Rogers collected are such "dockyard models." Walker points out that the name is suspicious. In one case, as close study has shown, "The model took longer to build than the ship it depicts."

Rather than thinking of these models as being built in the dockyard during the ship's construction, he makes a strong case that they were built in dockyards either before or afterward by knowledgable builders as gifts to powerfully placed officials operating in a system of patronage. In any event, the painstaking work in accurate plank-on-frame models is a joy to behold. Any kid who ever whittled a boat out of branch wood can find here something to aspire to—the highest form of the art. The best of these models were built by people who were there, who knew what they were about.

My favorite of the Annapolis collection—which I first saw at a young age—is ST. GEORGE, a 90-gun second-rater of 1701. The model stands out for its rigging, which is believed to be all-original and remarkably complete. Anyone who has ever moved a ship model

from one room to another can appreciate what must have been involved in moving a rigged model 39½6″ on deck by sea and by train from one continent to another. The model's rigging is spectacular—and formed much of the basis of R.C. Anderson's classic 1926 book, *The Rigging of Ships in the Days of the Spritsail Topmast.* This volume's wide format, with many photographs displayed full-page, presents the subject beautifully. Thirty-six pages are devoted to this model alone.

Years ago, I attended a symposium about French ship models at the Peabody Essex Museum (see Currents, WB No. 170) at which Walker gave a presentation about his institution's pioneering use of fiber optics to examine model interiors, which are sometimes surprisingly well finished. Nine such views of ST. GEORGE are included, mainly showing structural details. In addition to fiber-optic photos, X-ray and CTscan images, some of which appear in the book, reveal how models were built. These views satisfy more than curiosity: Internal photos showed widespread hide glue failure on one model, later restored by modeler Rob Napier (see WB No. 174), who wrote about the project in his own book, Legacy of a Ship Model: Examining HMS Princes Royal 1773 (Sea-Watch Books, 2010).

Walker's book starts with the oldest ship, BRITANNIA of 1682, and proceeds chronologically through



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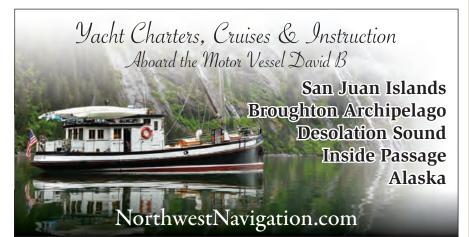
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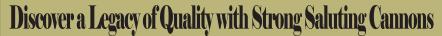


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ROYAL ADELAIDE of 1828, a great opportunity to track changes in shipbuilding. Each chapter gives the history of the model and the original ship. Each model being unique, variations in the presentation are inevitable and welcomed. There is a great deal of history to be absorbed here: The 1703 limitation on gaudy carvings, the gradual shift from mythological motifs to neoclassical, the use of cant frames starting in 1715, the universal use of ship's wheels in 1740...models are a key to maritime history, which in turn is a key to European history.

The volume is cleanly produced, and the combination of large overall photos with tight details is effective. Each chapter begins with a table of particulars. Here, I would like to have seen consistent presentation of the model's particulars in inches in addition to the ship's particulars in feet; as it is, I was often chased to the calculator.

The text is well written and informed by Walker's vast knowledge, and his admiration for the artistry of the modelmakers comes through. He also guides the reader to avoid whatever pitfalls might appear in each model. The only editing bobble I found in the book were the obvious errors of a repetition of a few lines of text (pages 147–48), and of captions under two photographs (page 150)—the latter unfortunately involving the only image showing Walker himself at work.

The Walker volume is the latest in a string of books by SeaWatch Books, based in Florence, Oregon, which has made a specialty of maritime history and modeling. It's rare these days to have such a publisher bringing the work of people such as Grant Walker and Rob Napier to the public so handsomely. This is niche publishing at its best, and I look forward not only to Walker's next volumes but to any and all others from this house.

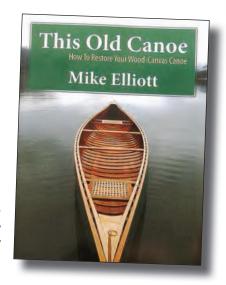
Tom Jackson is WoodenBoat's senior editor.

This Old Canoe

Reviewed by Jerry Stelmok

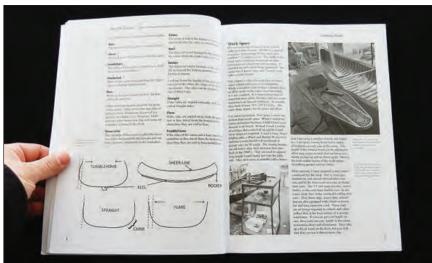
This Old Canoe, by Mike Elliott. Kettle River Canoes, 7480 4th St., P.O. Box 2324, Grand Forks, B.C, V0H 1HO, Canada. 176 pp., \$24.95.

y the first decade of the 20th century, canoe companies located primarily in Maine and Eastern Canada were turning out thousands of canvas-covered wooden canoes each year to satisfy the demands of a blossoming market for reasonably priced recreational watercraft. In the 1920s, Old Town alone was building nearly 5,000 of these sleek, versatile boats each year, and Chestnut of New Brunswick was not far behind. Add to this number the substantial production of companies such as B.N. Morris, E.M. White, Kennebec, Peterborough, and Rushton, among others, and the scope of the industry is truly astounding. The strong demand continued until the 1950s, before these largely hand-built craft began to lose favor to cheaper, lowmaintenance aluminum, then fiberglass, Royalex, and plastic canoes.



By the 1980s, when the woodand-canvas industry had been reduced to small shops and the basements of progressive companies such as Old Town, hundreds of thousands of the canoes had already been built and sold to customers throughout North America and beyond. Relatively inexpensive and valued mostly for their utility only, many lived short, hard lives and were discarded or tucked away as soon as any significant damage occurred. Others lived relatively plush lives of light duty on summer lakes, while being kept in the off-season in boathouses and barns, where they eventually languished when owners lost interest or became too old to use them.

In any event, there is an enormous supply of these resilient veterans that continue to be







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discovered by new generations of canoeists and admirers. Some of the luckier ones are still in sound if not pristine condition; others not so much. And many have suffered so much structural damage and deterioration that reasonable restoration is not a practical consideration. However, built primarily of cedar and held together with nonferrous clenched tacks, nails, screws, and bolts instead of glue, all but the very hopeless are candidates for repair, restoration, or even resurrection, and a new useful life.

In his comprehensive book, This Old Canoe, Mike Elliot begins by presenting the challenges a would-be restorer might encounter. He draws upon his experience repairing and restoring scores of these boats at his shop, Kettle River Canoe, in British Columbia. With the challenge laid down, he then proceeds along a path to returning a canoe to full service and a pleasing appearance. The heart of the book is a well-organized step-by-step text that begins with the elements of proper preparation, critical assessment of the project, and thorough planning that will set the stage for a successful project.

The text includes a chapter on disassembling the canoe, and separate chapters dealing with the various components including gunwales, decks, stems, ribs, planking, seats, and thwarts. In each case the author introduces the materials, tools, and techniques required, and how to apply them. He eases the reader into ever-more-complex, and often intimidating, steps such as the

steam-bending of stems and frames. The instruction is straightforward, down-to-earth, and unpretentious. If vou've never done anything like this before, you are made comfortable with your concerns and possible anxieties as you proceed. You are not spared some of the surprises

you are bound to encounter during this unpredictable endeavor. Elliot encourages a Zen-like approach that focuses your attention on the immediate problem at hand.

There is an extensive description of building seat frames, and step-by step-illustrated instructions for filling a seat with both natural cane strands and rawhide "babiche" in the traditional Canadian manner. There is also detailed instruction on carving a comfortable (at least as much as possible) and lovely carrying yoke. Although most topics are covered in sufficient detail, the discussion of varieties and properties of commonly used lumber species could be treated with a little more depth, as could the process of milling the available rough lumber into the finished parts.

Stretching the one-piece canvas skin tightly around a newly restored hull without the use of adhesives is key to the flexibility, resilience, and feel of a wood-and-canvas canoe and another procedure that causes much anxiety in first-time restorers. The author describes the traditional method adopted by nearly all the commercial companies to effectively and efficiently accomplish this task. This involves stretching an envelope of the canvas duck to the required tautness with a winch or come-along. The canoe is braced down into this hammock from the overhead to balance the horizontal tension, and the dry canvas is tacked or stapled along the sheerline and eventually along the neat seam at each stem.

Elliot discusses the pros and

cons of both traditional oil-based fillers, and water-based lagging compounds to waterproof and toughen the canvas skin. Painting, varnishing, installing outer gunwales, keels, and stem bands are also covered, and there is a full chapter on care and maintenance, including emergency repairs in the field.

The text is completed by a restorers' guide, which includes a brief history of the famous Chestnut Canoe Company of Fredericton, New Brunswick, and descriptions and photos of five of the company's iconic models. Also included are photographs, dimensions, and detailed drawings of a number of other canoes of Canadian manufacture.

Author Elliot has taught himself his craft from available literature, the Internet, and most important, through trial-and-error. He has not been afraid to forge ahead, and has discovered and rediscovered the methods and techniques that most of us in the field have learned in exactly the same way. He promotes some methods that others approach a little differently, but defends his practices. For example, he suggests applying varnish to the interior while the paint on the exterior is drying, and then applying paint to the exterior while the interior varnish is drying. For me, this practice has led to adhesion problems. However, as always when I examine someone else's work, I learned a few new things. Anyone taking on a restoration would find Elliot's book very useful.

One element missing from this first edition is likely the result of the regional nature of the author's business, which is tucked away out of the traditional mainstream of canoeing in the East. Most of the canoes described in the book are of a type: sturdy, common-sense models designed for rugged use in the backcountry and characterized by modest profiles and sheerlines; they are largely unadorned with accoutrements that can present new challenges to a restorer. But these options are found on canoes, such as the fancy Charles River courting canoes, the Kingsbury, and some B.N. Morris models,

as well as high-grade Old Towns. These details might include very fine lines; high profiles; long, framed decks with coamings; closed gunwales with caps and pockets for rib tops; outside stems; sponsons; and the like. I'm sure that as Elliot's business grows he will encounter these challenges, solve the inherent problems, and perhaps include them in a future edition.

This Old Canoe is written, illustrated, edited, published, and designed by the author. Much of it first appeared in blog posts initiated in 2009. The printing and quality of the stock is excellent, and with digital cameras, design software, and publishing aids, self-published books such as this one can stand on their own merits with no apologies needed.

This Old Canoe will inspire many owners of neglected or battered old canoes to consider renewing them,

and then provide these folks with the knowledge they might need to complete a successful restoration.

Doing business as Island Falls Canoe in Atkinson, Maine, Jerry Stelmok has had a hand in the construction of more than 800 wood-and-canvas canoes, dinghies, and models. He has written many magazine articles on the craft of canoe building, and two books—and is co-author of a third book.

BOOKS RECEIVED

SoloMan: Alone at Sea with God and Social Security, by Jack van Ommen. Published by the author, www. SoloMan.us. 327 pp., softcover, \$60. ISBN: 978–1–5196–7576–7. The author spent nine years sailing the world alone in his 30' wooden sloop, FLEETWOOD.

Steamboat Memories—Penobscot Bay, by Bob Witherill. Published by Indie Author Warehouse, 558 Main St., Rockland, ME 04841, www.indie authorwarehouse.com. 59 pp., \$17.95. ISBN: 978–1–940244–53–2. A history of the steamboats that brought thousands of summer visitors from Boston to Maine in the decades around the turn of the last century; includes illustrations, historic photographs, personal recollections, and local newspaper articles.

*An Unlikely Voyage: 2000 Miles Alone in a Small Wooden Boat, by John Almberg. Published by Unlikely Voyages, 249 Lenox Rd., Huntington Station, NY 11746. 317 pp., softcover, \$19.95. ISBN: 978-0-692-60143-3. An engaging tale of a voyage from Florida to Long Island, New York, in a Thomas Gillmer-designed Blue Moon.

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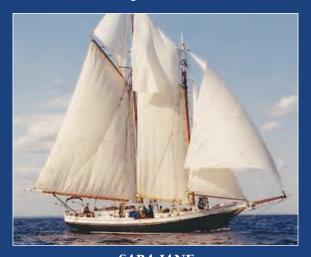
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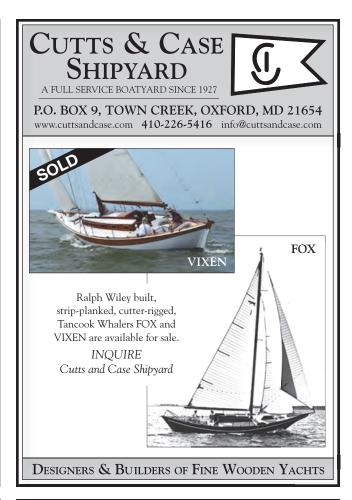
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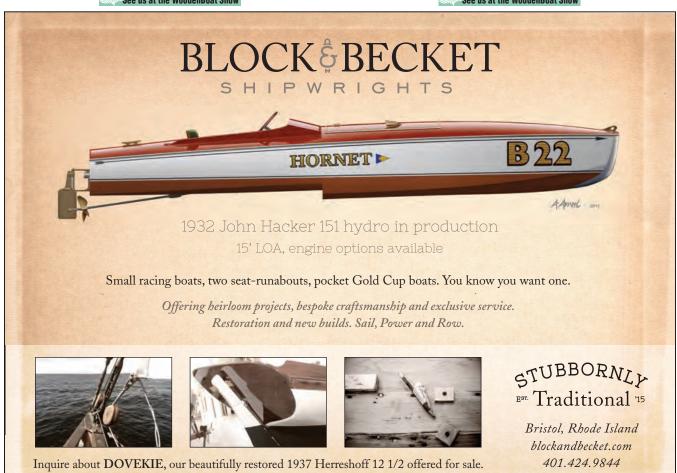


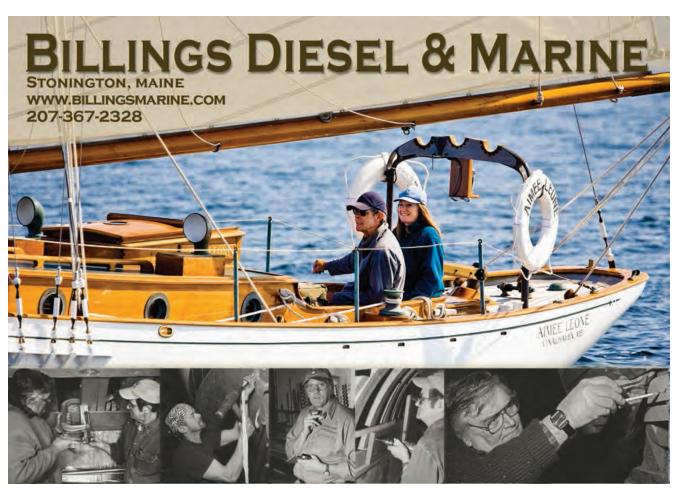


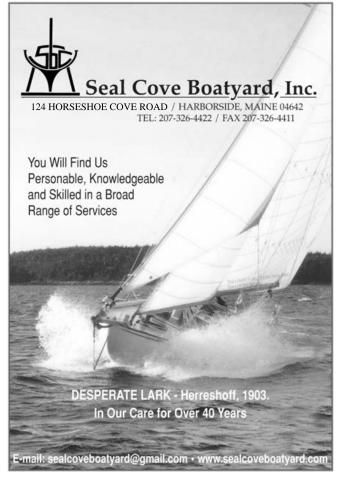
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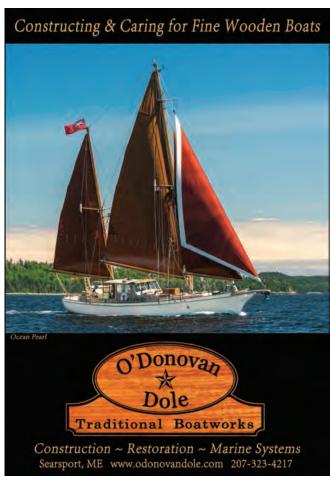










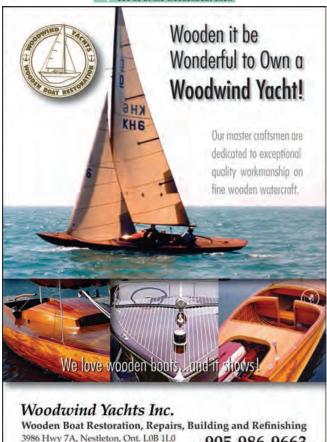




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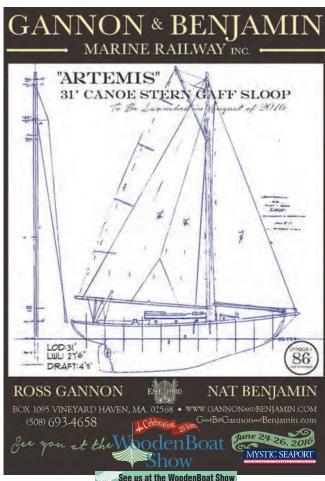


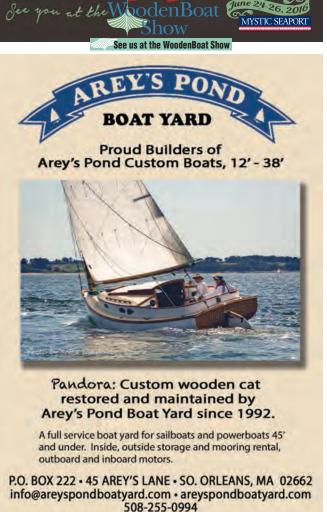




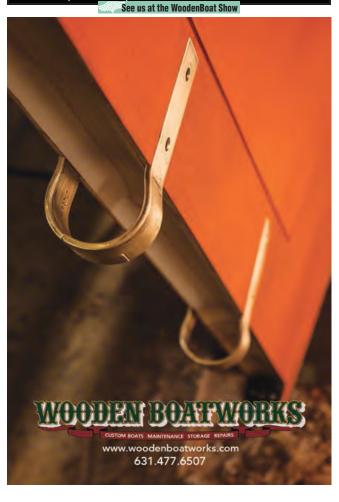
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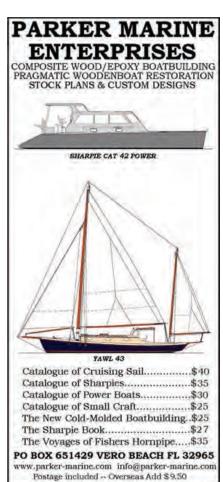


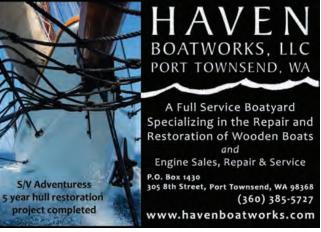














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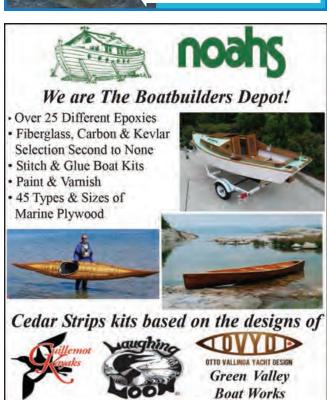




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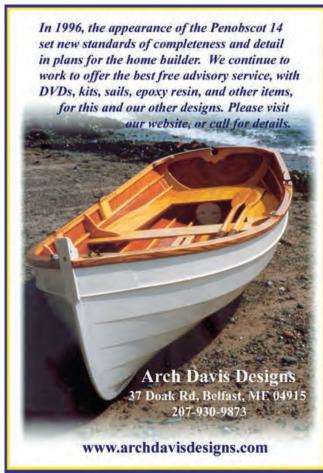


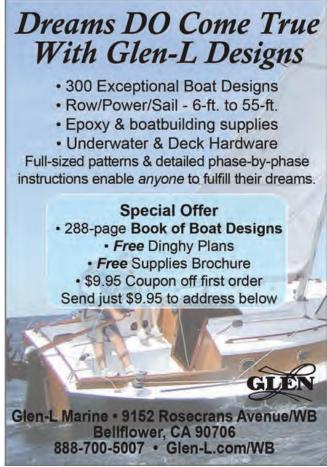




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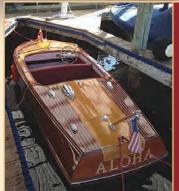


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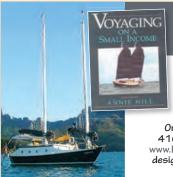


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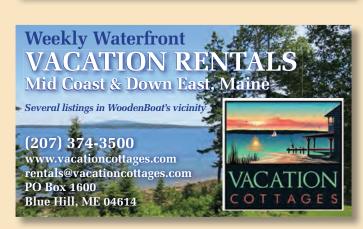














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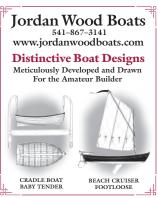
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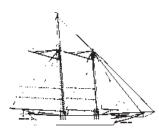


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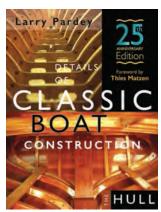


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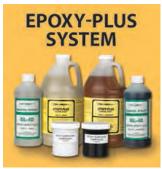
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OVER 60 SPECIES OF HARDWOOD, softwood, and marine plywood. Marine woodworking: swim platforms, transoms, companion ways, hatch covers, built-ins. Custom milling and shaping, CNC work. Visit our website www.parkervillewoodproducts.com or call Parkerville Wood Products. Connecticut, 860–649–9663.

See us at the WoodenBoat Show

ATLANTIC WHITE CEDAR—Canoe strips, bead and cove, utility fencing, clear siding, decking and trim. Wide board teak. 203–245–1781, armsters@yahoo.com.

Boats For Sale



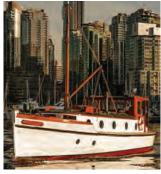
THE WEST POINT SKIFF—Three models: 16′, 18′, and 20′. See our website, www.westpointskiff.com, for more info. 207–389–2468.



1953 25' CHRIS-CRAFT ENCLOSED cruiser. Hull #194 of 224. Second owner since 1978. Inboard gas 350 repowered 2012. New canvas, seats, cushions 2013. Dinette, galley, head, bunks. Very good condition. Reduced to \$9,500. Call Brian 860–490–8508. Mystic, CT.



1957 HINCKLEY PILOT, 35 mahogany on oak, fully battened mainsail, Harken roller-furling genoa, newer sail cover, dodger, 29-hp Volvo diesel (low hours). Sails beautifully with huge, comfortable cockpit. \$36,000. 207–563–2723, natandpromis@gmail.com. Newcastle, ME.



EXQUISITE, IMPECCABLY restored 1911 powerboat. Numerous awards. Rich documented history. Loved by all. Strong and seaworthy cruiser. \$70,000 US funds. Optional delivery and orientation. Skype or Facetime viewings on request. David Campbell604–992–5590, dcampbell@boatingreedom.com.



2007 WILLIAM GARDEN CAT-schooner, 19' x 7' x 3'4". Like new, sailed ten times. Double berth, woodstove, hanging locker, sink, diesel, foresail, mainsail, fisherman staysail, no trailer. \$9,500. New Murray Peterson 6'8" dinghy also available, \$1,500. hickman31@verizon.net. Cape Cod, MA.

1931 FAYBOW 18 AND TRAILER. Rare boat, last in the water 2007. Original hull, Lycoming 4-cylinder runs good. \$6,500, firm. Dan, 314–276–2342.

TAHITI KETCH—\$15,000. 'Glassed hull,deck strip planked mahogany, West System epoxy. Kubota diesel 500 hours. 252–626–7330. Bridgton, NC.



2010, 16' LOWELL SAILBOAT. Includes trailer. Custom made by Lowell's Boat Shop, Amesbury, MA. Comes with Shaw and Tenney oars. Can deliver up to 1,000 miles. \$6,500. 210–286–0321, joed@swecs.com. Located near San Antonio, TX.



REDWING 18 SHALLOW-DRAFT pocket cruiser in perfect condition, professionally built to Chesapeake Marine Design Plans. HUMBUG comes with a heavy-duty trailer, electric-start 10-hp Honda, and a long list of accessories. Asking \$17,000 or best offer. Pictures and more information available. rdoormann@vom.com or 707–265–8415.

HERRESHOFF DIDDIKAI, 1946; immaculate. 1995 refit. New engine 2011, MaxProp, electric, aluminum mast, SS rigging, CWB Seattle. \$27,500. 206–504–9375. Photos: alicealkire@hotmail.com.



1996, MCGUIRE 23. ANDREW Wolstenholme design; professionally built in Santa Barbara. Star-boat boat keel. Cedar-planked modern epoxy construction, teak accents. One-cylinder Yanmar engine, straight shaft, folding prop. Fast, stable and dry. Seacoast Yachts 805–962–8195. Santa Barbara, CA.



NEW 2015, 18'MINI-GENTLEMAN racer, four-ply laminated mahogany construction with epoxy and varnish finish. New 2015 130-hp (3.0 liter, 4-cyl) freshwater-cooled MerCruiser with factory warranty. Call Sam at 739–990–5975



OHLSON YAWL 36, 1961, AFRICAN mahogany on oak frames, copper rivets, tight-fitted seams, teak deck. Volvo diesel, Dyer dinghy, 13 sails, dodger, awnings, extensive inventory, all excellent condition. Same owner 30 years, dry covered storage 12 years, only needs easy exterior cosmetics and some minor cockpit scupper work. Lying Niagara-on-the-Lake, Canada. \$7,000. spindrift@sympatico.ca.



39' PHIL RHODES DESIGN. "Cygnet V" built of longleaf pine on oak frames at St. John, NB, 1948. Yanmar diesel. Extensive refit and upgrades in past 10 years. New laid teak decks. Recent survey. \$32,000. petermourer@comcast.net, 206–325–6132. Seattle, WA.



MAINE BUILT FRIENDSHIP sloop, 1980. Excellent condition, \$16,000. Cedar planking, bronze fastened, 22' on deck, 7'6" beam, 3'6" draft, outside lead ballast. New sails, 6-hp, 2011 Tohatsu, sleeps two, trailer. 360–730–1393, mlooram@whidbey. net. Langley,WA.

Boats For Sale continued



THE YEAR UNKNOWN. This boat is quite a mystery. \$4,900 or best offer. 617–610–2226, oceanriggs@gmail.com. Hope, ME.



"BOLD BOY", LOCATED IN Camden, ME, is a beautiful example of this iconic Herreshoff 12½ design. Rebuilt from the keel up in 2000; this boat is in exceptional condition. Asking \$22,500. Contact Scott Woodruff, CPYB, at 954–701–1072 or scott@ecys for more information.

1925 TIMBER POINT #9, 23'. Maintained diligently at Southard's. Class subject of Bode's book. Time for this one to pass, perhaps to another caring family. \$15,000. lethin@reservoir.com. Great South Bay, NY.



BUILT BY MORTON and JOHNSON Shipyard in 1957, "Glory" is a centerboard yawl representing a classic Sparkman & Stephens design. Design #1293, refit half completed, over \$300,000 spent with the Artisan Boatworks recently. Asking \$58,000, contact Scott Woodruff, CPYB, at 954–701–1072 or scott@ecys.com.



14' ADIRONDACK GUIDEBOAT. Award winning, cedar-strip guideboat. Cherry gunwales, seats, oars. Trailex trailer included. \$7,000. 410–446–4861 for more information. St. Augustine, FL. PETER CULLER'S LAST BOAT. Featured in John Burke's book "Pete Culler's Boats: The complete Design Catalog," chapter "Swampscott Dory for Captain Charles Sayle." Very good shape, stored inside for last 25 years. 18'8". \$3,500. 508–228–3940.

1918 PEA POD FROM MAINE (double-ender). Like new inside and very good outside also. Stored inside for the past 30 years. \$1,500.508–228–3940.

AN ORIGINAL LOWELL DORY built in Amesbury, MA. Just used in a movie filmed on the Island with Jacqueline Bissett. \$1,500. Have all the original thole-pins and a newlymade mast. Will take a fair offer for all three (see boats in two previous listings). 508–228–3940, 508–325–1878.



ROYAL LOWELL 30 UNDER construction at Traditional Boat. Cedar on oak. Bronze. Bright mahogany interior. Looking for an owner to have us complete her at \$42/hr. Please see her at www.mainetraditionalboat.com. \$150,000 at current stage of completion. 207–322–0157.



19'6"FAERING "FLICKA" DESIGNED by Bruce Elfstrom, built 2006. Seagoing "raid" style day boat, two Piantedosi drop-in sliding-seat rowing bars, four carbon-fiber oars, carbonfiber balance lug fore and sprit-sail mizzen. Lightweight, fast, responsive, fun, beautiful. Fully equipped. Stored inside. Full description/equipment list available. \$4,000 for boat with custom cover; \$5,000 with trailer. Delivery to Maine possible. 908–310–1401, fniepold@gmail.com.



1959/2000, 26'GEHRLEINS "EDEL-WEISS" Bass Boat. Pristine condition. Complete rebuild. New stem, keel, transom and cold-molded bottom. New electrical, plumbing, and mechanical systems. New fuel tanks and Yanmar turbo diesel. New custom mooring cover. Rebuild history and survey available. \$69,000. 201–410–3480 or slanzner@gmail.com. Branford, CT.



R-SLOOP 38'BOB-KAT, MAHOGANY plank over white oak frames. Teak deck. Great shape. Including varnished spruce mast and rigging. Needs sails and surface work. Like new. Heavy duty white oak cradle. \$5,800. Contact 231–920–9624. Traverse City, MI.



SLOOP RIG, FULL KEEL, mahogany over oak, made in Sweden. New rigging, wiring, Dynel decks. two-cyl, 20-hp Yanmar, low hours. Bristol brightwork, full winter cover. Asking \$27,000. Call/text 443–735–1102. Crisfield, MD.



48' FRERS CUSTOM "RECLUTA." Two times Halifax winner. Many sails. Fully functional, fast, sails great. Needs topside paint, scraped by another boat. Superficial damage to Awlgrip. West hull. Plywood deck. Varnished interior. Great boat, \$25,000. 978–828–9044. Gloucester, MA.



1947 CHRIS-CRAFT RUNABOUT, 17', includes trailer and water-level cover. Can be seen at www.woodboat. net, or call 815–385–9454. \$25,900.



1961, 36'CHRIS-CRAFT SEA SKIFF. Two 225-hp freshwater-cooled engines, 2.5:1 transmission, hydraulic steering, 6.5-kW Onan generator. \$6,000. 781–646–2795, hydra5@verizon.net. Boston, MA. CLASSIC WOODEN HERRESHOFF 28'. Owner unable to use. Will sell cheap. 956–299–0634. Bayview, TX.



60'U.S. ARMY QUARTERMASTER launch, 1918. Beam 12', draft 5'6". Designed and built by Luders. Detroit 6-71, Northern Light 12kW, hot-water heat. \$76,500. 401–743–1490. More info at www.faralloneforsale. wordpress.com. Newport, RI.



24' KEEL CENTERBOARD YAWL, 1958. Designer: William H. Shaw, N.A. Builder: Jensen & Sons, Denmark. Roller furling jib, new cockpit and cabin cushions. \$20.000. 401–743–1490. More information at www.venindeforsale.wordpress.com. Newport, RI.



ANGELFISH, BREMERTON,WA. Newer 4-cylinder, 60-hp, dry-stacked Hino diesel. Renovated galley and staterooms. \$19,500. Photos at yachtworld.com/poys. 360–876–4584 or 509-540-7840.



26'CONSTANT CAMBER FOLDING Trimaran. Okoume plywood and 6-oz fiberglass cloth set in epoxy. Fullbattened main, Harken furler. Excellent condition. Completely renewed tandemaxle aluminum Loadmaster trailer. Asking \$20,000. 860-235-0487. CT.



THRUMCAP SPARKMAN & Stephens—1959, Pilot 35 sloop. Large sail, electronic inventory, Volvo diesel engine. Large 3-axle trailer. \$25,000, Canadian funds. 902–894–3457, murmundle@gmail.com.



1929, 24' CHRIS-CRAFT MODEL 3 Triple-Cockpit. Re-powered with a Crusader 305. Well maintained. Original engine included. \$95,000. 508– 737–1280, fred.curran@flcrsi.com.



PRETTIEST BOAT IN THE Harbor—19 Buzzards Bay gaff-rigged sloop. Pete Culler design built by The Landing School. Lapstrake Honduras mahogany over oak. Sitka-spruce spars. Bronze fittings. Excellent condition. 8-hp outboard, trailer, oars, etc. \$14,500.603–431–7876.



HODGDON 27', LOBSTER pleasure boat. Designed by Sonny Hodgdon; built 1947. Completely restored; needs no work. Yellow pine on white oak. V-berth; chart table. Gray marine 55-hp. Show winner. Asking \$34,000. Text 218–393–1939, vongoertzpaul@yahoo.com.

1964 CONCORDIA 31' SLOOP. Cedar on oak. Yanmar diesel, low hours. Woodstove. Restored. Well maintained. Possible shipyard slip. 360–378–5224. Friday Harbor, WA.



1967 LYMAN CRUISETTE Hardtop in excellent condition. Recently rebuilt Chrysler 260-hp V8 (1,000 hours), V-berth sleeps 3, with restored bright woodwork and new electrical system. Comes with Furuno radar, Garmin GPS, depthfinder, teak swim platform, bow levelers, new fuel tanks. Asking \$25,000 or best offer. Pictures on request. Truly a beautiful boat. Call David Grogan, 917–301–3004.



N.G.HERRESHOFF'S BISCAYNE Bay 14′ daysailer, built 1990 by R. Milner at Hudson Valley Boat. Length 14′5″, beam 5′, draft 1′, 3′ board down. Approximately 1,000 lbs, 122 sq ft sail area. Call Tom at Artisan Boatworks Brokerage, 207–701–1661. Located southwest ME.



1940 GAR WOOD 20'6" UTILITY. Professional restoration, multiple "Best In Show" awards. Original Chrysler Crown, 6-volt electrical systems. Correct leather interior. Solid dual-axle trailer. Ready to enjoy or show. \$49,900. Serious inquiries, scout@rochester. rr.com. Rochester. NY.



2015 WELSFORD GAFF-RIGGED sloop, 21"Penguin", motor and custom trailer. Featured in *Small Boats Monthly*, December 2015. \$14,900. jabromaitis@gmail.com. Ottawa, Canada.



1979, 12'6"LOABLACKHALL RIVER Skiff by John D Little, Washington, ME. Classic 19th-century design, copper-fastened cedar over oak frames, mahogany trim. Galvanized steel trailer, recent new lights, tires and wheel bearings. \$4,700. Contact: 203–255–8058.



1960, 31' CROSBY ALBACORE Downeast cruiser built in Osterville, MA. Perhaps the last of her kind! Original Gray marine twin V-8, rebuilt. Garmin radar/chartplotter. In same family for 35 years and well maintained. \$19,500.



1973, 23' RIVA SUPER ARISTON, Hull#994. Professionally maintained. Needs cosmetic work. Low hours on replacement engine. \$125,000. 508–737–1280, fred.curran@flcrsi.com.



26'NORWALK ISLAND SHARPIE. Bruce Kirby design. Beam 7'11", Draft 12" board up. Fast, fun boat. Easily single-handed. Built by professional yacht rigger. Launched 1992. Bruynzeel plywood, epoxy and glass. Fiberglass masts, aluminum booms. Fresh paint and ready to go. \$23,000 or best offer. dajames@optonline.net.

1968 32'CUTTER—MAHOGANY/oak, lead keel, bronze screws/hardware and monel tanks. Teak deck, dynel roof, Oceanus sails, electronics/GPS/chart plotter and engine all new in recent years. Boat is in good/great condition and sailed in 2015 until November. Valued at \$45,000 before new engine. Asking \$37,000. Call/text 709–746–3644.



"FADE AWAY", 38' ON DECK, 10 tons. Low-hours BMW D-35, autopilot, refrigeration and much more, including powered dinghy and historical documents. Largely rebuilt over past 20 years, fir on oak. Ready to return to racing, ocean sailing, or coastal cruising. Lying Los Angeles, \$35,000. Contact Calvin Milam, 310-804-4837, rcalvinmilam@aol.com.



26'SEABIRD YAWL 1987—Built and maintained by Hadden Boat Co. Yanmar diesel, new decks 2012. Featured in *WoodenBoat's Small Boats 2012*. Also see www.haddenboat.com. \$35,000 negotiable. 207–371–2662.



30' TANCOOK WHALER, 2010, designed by George Stadel. Wana on oak. Lying Woods Hole. \$35,000. 508–540–6604. brboater@gmail.com.



CATSPAW DINGHY FOR SAIL and oar. Joel White design built by owner in 2008. Traditional carvelplanked cedar on oak frames. Sprit sail rig. Trailer included. \$7,500. mpj513@hotmail.com, 443–910–4410. Bel Air. MD.

Boats For Sale continued



42′ X 12′ STOUT TRAWLER, 1947/1990's conversion. Gardner 120, 6L diesel. Twin disc. 500 gallon fuel, hydraulic windlass. Systems/Tanks 1990. Hydronic, AC heating. Garmin HD radar/plotter. Wagner AP. Two helm. Walk-in engine room. Professionally done. Custom 10′ dinghy. \$179,000. charlotdeny@gmail.com. Astoria, OR.



33'6"AAGE NIELSEN YAWL, LUKE built 1954. Varnished spars, new rigging, new Beta engine, Raytheon radar, GPS, new wiring, stereo, Dynel deck and house; large sail inventory includes roller-furling genoa. Asking 45,000, offers considered. 603–569–2024, leighro@myfairpoint.net. Located Penobscot Bay, ME.



1969, 26'SAKONNET/MACKENZIE design. True bass boat, shallow waterline, clinker topsides. Keel cutaway, forward and aft controls. Reverse laps on the bottom, 6-cylinder Isuzu diesel. Full electronics, custom-built trailer. Ready for the water, must see! \$19,900 or best offer. Amaxxincoffice@gmail.com.



1924 HERRESHOFF 12½. Major rebuild in 2012 including new sails and mooring cover. \$25,000. Contact Frank Duncan, 339–225–0839.



1933 GAFF CUTTER, TEAK ON OAK, by Capt. O.M. Watts. Massive, well sorted out, owned 25 years. Picture gallery on sandemanyachtcompany. co.uk, page 10, "Makora." 011-44-1202-330-007 and 001-818-853-7101. \$148.000.



24'SPORTFISH AVELLAR. BUILT by Whiticar in 1964; fully restored in 2014 by Yachting Solutions; engine rebuilt; original hardware rechromed. Just a great boat. See listing at www. cppyacht.com, under Powerboats, 24'. One of a kind. \$29,000. 207-236-2383. ME.



"ZEPHYR" WAS BUILT AT GANNON & Benjamin in 2005. She is a custom-designed centerboard sharpie set up for comfortable sailing with small groups of kids. Perfect boat for family sailing in protected waters. A classic, one of a kind! \$12,000 or best offer. Contact John Rowse, 617–595–8557. john@communityboatbuilding.org.

"I know who you are, but you'll have to wipe your feet."

Capt. Richard Brown of the schooner America
to Prince Albert of England, 1851.



ONE-OF-A-KIND—CUTTER RIG wooden sailboat. 22'10" LOD, 31' LOA. 9' beam, 4' draft. Mahogany on oak, teak house and teak/ash interior, launched 1987. Carries a 6'8" Montgomery pram dingy/lifeboat, outfitted for survival, with sailing rig and canopy. Outboard motor 6-hp, carries 60 gallons water and 10 gallons fuel. Water system gravity feed. Sail inventory: main, staysail, jib, light air drifter. \$34,500. 949–246–8116. Newport Beach, CA.



36'6" L. FRANCIS HERRESHOFF ketch DEVA. Only one of her design ever built, 1985. See feature in WB No. 157. Extensive work performed at D.N. Hylan & Assoc. in 2014; new sails, etc. See listing at www.dhylanboats.com/brokerage/deva-for-sale. Gorgeous one-of-a-kind. \$58,000 firm. 207-359-9807. ME.



15' CHESAPEAKE LIGHT CRAFT sailing and rowing wooden boat built from one of the best-known boat-building kits in the world. Includes spars, sail, oars, rudder and daggerboard, galvanized trailer. Lightly used and in excellent condition. Asking \$5,800. 603–772–3498. j24sail@aol.com.



WELL MAINTAINED IN excellent condition; two rowing places, Shaw and Tenney oars. Built at Eastport School in Maine, in 1990's. Trailer included. \$5,500. 506–653–1327. New Brunswick, Canada.



HAWKSBILL 1965 JOHN ALDEN Motorsailor. Twelve month, New England huge restoration. Extra large cockpit. Perfect fishing;diving; great all-round family boat. Caterpillar 3306. 1,000-gallon fuel. Cruises 9 knots; 3,500 miles of range. 400-gallon water tanks. 30-gph water maker. New three ton AC. New electronics. Plus so much more. Length at waterline 57', LOA 64', beam 15'6", draft 5'. \$375,000. Call Jack 305-407-6882, homefromhome4u@gmail.com.

Boats For Free

21' CROSBY MALLARD SLOOP. Built in 1951 by Nobel Prize-winning scientist Ray Davis. Restored in 1985. Needs some work. 8-hp Palmer; last run in 2005. Includes trailer, mast, sails, etc. 631–878–8847, email davismaple@gmail.com.

1962, 37'GAFF KETCH; same owner 46 years. Sound, diesel, pilot. Needs small cosmetic wood work. Right party. 401–527–2754. Mathews, VA.

1956, CHRIS-CRAFT 27' BULL-NOSE, small cruiser project. Reframed and ready to finish. No trailer or engines included. NW Florida. 850–417–5582.

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SAVE A CLASSIC



CALUNA

A shallow-draft cruising yawl

D ack in the 1980s while poking around in Dion's DYacht Yard in Salem, Massachusetts, I came across CALUNA. Finding her attractive and unusual, I snapped a couple of photos and never forgot her. So when a package arrived recently suggesting that she be featured in this column, I saw it as a chance to help save her.

CALUNA had been storm-damaged when Walter Toney, a lifelong woodworker who wanted a retirement project, acquired her through the Wooden Boat Rescue Foundation. This was around 2000, and for the next dozen years he, with help at first from his brother-inlaw, began the restoration of his dreams. Unfortunately, he died before he got the job finished.

> From photos, and as described by Walter Toney's son, Scott, who inherited CALUNA, the hull repair is pretty well complete; the deck (of fiberglass-sheathed



Top-The Lawley-built CALUNA at Dion's Yacht Yard in the 1980s. Above - CALUNA has undergone a meticulous partial restoration, but now lies exposed to the elements.



plywood) is new; and she has a completely new mahogany trunk cabin and companionway. Then there's the overhauled engine, the fittings and

27' LWI. 11'3" Beam Draft 3'4" Power 30-hp Perkins diesel Doc. No. 626984 Designer J. Murray Watts Builder F.D. Lawley, Inc., Quincy, MA, 1926

other hardware, most all the rigging, the booms (there are no masts or sails), and a considerable file of paperwork including the boat's original written specifications. Fastenings were changed during the restoration from steel to bronze. Walter Toney's work was thorough and careful and endorsed when partway along by surveyor Paul Haley of G.W. Full & Associates.

CALUNA was launched as BEUELLA and used in her early years around the shallow waters south of Cape Cod, Massachusetts. She was originally a sloop, but in the 1950s became yawl-rigged and was renamed GALEGE. It's easy to understand why a person might find this yacht compelling, no matter what rig she car-

> ries: She's very nice looking; she came out of one of the very best building shops; her hull is double-planked and has pretty much held its sheer; and she can float in only a little over 3' of water with her centerboard raised. Once her meticulously begun restoration is completed, you'd have an ideal cruising boat.

> CALUNA's interior remains pretty well stripped out, so there's plenty of work left to go even though the heavy lifting is done. Tarps now keep out most of the weather, her temporary shed's cover having disintegrated. So she's far from being fully protected. There's a need to get to her soon, before Mother Nature does her in. It would really be a shame to lose this one.

> For more information or to inspect CALUNA at the owner's home in Chelmsford, Massachusetts, contact Scott Toney, scottoney@hotmail.com; 617-*875–7342*.





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A special thank-you to the owners of Moonmaiden II. Beautiful paint job.

