

**Special Feature This Issue**  
"Tasmanian Wooden Boat Show"  
"The Little Boat Who Could" - "Clytie"

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# messing about in **BOATS**

Volume 19 - Number 9

September 15, 2001

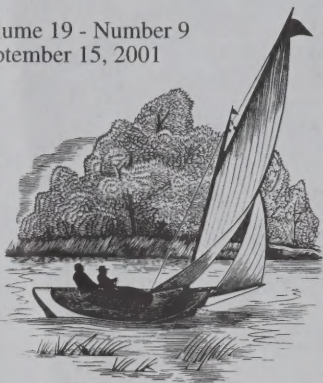


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# messing about in BOATS

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Volume 19 - Number 9  
September 15, 2001



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## Looking Ahead...

Jim Thayer came east from Colorado to ramble through "WoodenBoat West", this year's WoodenBoat Show held in Michigan and reports on what he saw.

Kinley Gregg describes rowing on the Thames in England in "A Trip I Could Tolerate"; and Bill Zeitler reports on "Another Cruise in my PMT Amenity".

Bill Huguelot details his experiences in budget boatbuilding in "A \$200 Sailboat Completed"; George Fulk gives us "A Report on Two Bolger Skiffs"; Mac McCarthy lists "The Most Frequent Questions" he is asked by wannabe boatbuilders; and John Longbottom tells us that he's a "Harry Bryan Fan".

Craig O'Donnell and Gavin Atkin reveal who the mystery builder and his boat were at the John Gardner Small Craft Workshop featured in the July 15 issue in "Mouse & the Mouse Family"; Sharon Brown provides a long historic overview of a small traditional boat in "Row Mystic Seaport's Chamberlain Dory Skiff"; Gerard Van Wyk announces, "Oh, No, Not Another Mini Tri?"; and a reprint of an old Weston Farmer article describes another sort of mini in "Mini Max"; Dennis Davis has Part 6 of his ongoing series "Design Rules - OK"; and Phil Bolger & Friends present their "Cabin Clam Skiff".

Robb White offers some inside skinny in "How to Apply Fiberglass & Carbon Fiber to the Inside of a Hollow Mast"; and Curtis Nichols suggests an alternative rowing style in "Push on Your Oars".

## Commentary...

Bob Hicks, Editor



There's a growing pile of new boating books stacked against the wall to my right in my office as I sit here at my Mac composing this "Commentary", review copies that come in from publishers in hopes of our reviewing them. While in most cases I do not request these books, I do feel somewhat obligated to review them since the publishers went to some trouble and expense to send them to us and their subjects are germane to the interests of our readers.

But, there's no way I am going to read them all. My reading takes place at day's end after supper and by 9pm I'm nodding off. I also cannot in good conscience read a book about a topic in which I'm not really interested, because the tedium of so doing would not result in an objective review. "Not really interested?" you may ask. How can the editor of a small boating magazine not be interested in books about small boating?

Summing up why not, it's the "been there, done that" situation, over the 23 years I've been engrossed in boating, 19 of them publishing this magazine, I have read many, many books on all aspects of this subject, with the greatest interest in my early days on the learning curve.

I still do select specific books that come in that grab my attention and review them for you. But most books I have been farming out for reviewing for a number of years to a small "staff" of reviewers drawn from amongst readers who respond to my announcing that I have all these neat books about boats looking for reviewers, and if you wish to be one you get to keep the book.

The subject has gained sudden new urgency now because we have lost a most reliable and informed reviewer. A. Bennett Wilson, whose latest review of *The Sailmaker's Apprentice* is on the opposite page, is suddenly no longer with us. His wife notified me of the shock of his sudden demise while out sailing with a friend in his beloved small sailboat which he had built himself. He had been standing in the stern while a friend sailed on, and when the friend had occasion to look around, Ben was gone. He had fallen overboard without a sound. The friend was unable to reverse course (no motor was fitted) and after help had been summoned, Ben Wilson was pulled from the water dead from apparent drowning at 80 years of age.

Ben had been a lifelong sailor, and his wife is quite sure that he had fallen victim to a heart attack, for he had an ongoing history of heart problems. She acknowledged that the suddenness of his taking leave was a shock to her and family and friends, but that it surely would have been the way he would have chosen to go, doing what he loved in the boat he had built himself.

I now have to do something about attracting a few new reviewers. So, herewith I invite readers who are possibly interested in undertaking this volunteer task to contact me (by mail, please). Below I list the current stock of books in need of reviewers so you can indicate which title(s) you feel you wish to read and review. Please realize that some may already have been spoken for by the time I hear from you, but more are always arriving. As I mentioned, you get to keep the review copies.

AMC River Guide - Massachusetts, Connecticut & Rhode Island  
Bear of the Sea - Gloucester/Nova Scotia fisheries years  
Behemoth & Microship - Hi tech computerized trimaran  
Do Your Job - History of the Portsmouth (NH) Naval Shipyard  
Essential Boat Maintenance Manual  
Flying Cloud - Famed clipper ship story  
From the Cockpit of the Rubaiyat - Cruising Sailor Memoirs  
Hard Bottom - Fiction, destruction of commercial fisheries  
Portsmouth Built - History of submarine building at Portsmouth (NH) Naval Shipyard  
Quotable Sailor - Compendium of Sailing Quotations  
The Annapolis Book of Seamanship  
The North Bay Narrative - 100 years of Newfoundland boatbuilding  
The Splicing Handbook - Techniques for modern & traditional ropes  
The Strange Last Voyage of Donald Crowhurst - Round the world race hoax/tragedy  
Water Trails of Western Massachusetts

## On the Cover...

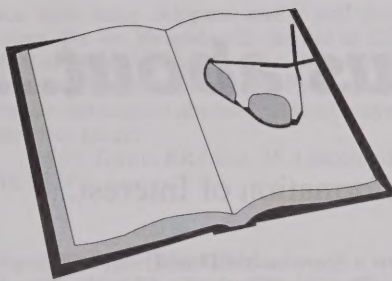
Robert Nelsen all alone in an Erie Canal lock enjoying his mini canal boating adventure in "The Little Boat Who Could" featured in this issue.

Although I haven't read all of the contemporary books on sail theory and sailmaking, I have owned nearly a dozen in recent years, and I believe that *The Sailmaker's Apprentice* is without a doubt the most comprehensive publication on the subject of all aspects of sails. Stated on the dust jacket is, "With this book, anyone can learn to design, make, repair, improve, and maintain sails," and I believe it.

The author is a lifelong sailor who learned to sail at an early age on Cape Cod on the Bass River and presumably on Nantucket Sound. He has been making sails since 1974. After a rigid apprenticeship he opened a sail loft in Costa Rica, where he saw the results of all sorts of sailmaking techniques and materials that had been subjected to all sorts of conditions, especially on the long range cruising boats and yachts that put into Costa Rica for repairs.

The shoddy workmanship and poor selection of materials prompted the author to write, primarily for consumers, a short treatise on the construction of sails he titled "The Sailmaker's Dozen," which he passed out to customers. For the next 15 years he worked off and on at expanding the pamphlet to a full-fledged book. During that time he produced the "Sail Doctor" feature that appeared in *Small Boat Journal* and has been a regular contributor to *WoodenBoat* magazine for many years. Much of the material published in these magazines is included in this book. His clear and concise prose is supported by 700 of the clearest, most elegant drawings by Christine Erikson.

*The Sailmaker's Apprentice* is divided into a dozen chapters, supplemented by five



## Book Review

### *The Sailmaker's Apprentice*

By Emiliano Marino  
International Marine, 1994  
494 pages, \$39.95

Reviewed by A. Bennett Wilson, Jr.

appendices and an index. The first chapter introduces the reader to the tools and many of the techniques of the sailmaker by giving detailed instructions for making a ditty bag without benefit of a sewing machine. I would have saved a lot of time and done a better job if I had had the benefit of this chapter before I

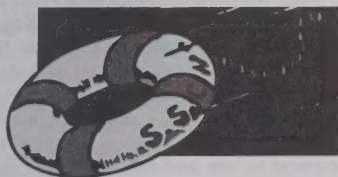
made the few sails that I have made. The first chapter is followed by a short treatise on the overall factors, such as where and how the boat will be used and helm balance, that need to be considered in the design and use of sails.

Chapter 3 is devoted to a thorough description of nearly every type of sail, sail rig, and sail configuration ever used by man. This chapter could be a small book in itself. It should be especially interesting to everyone intrigued with sailing whether or not he or she ever intends to make a sail. After Chapter 4 on sail shapes and theory, Chapter 5 tells the reader how sails are made commercially. Instructions for making one's own sails are given in exquisite detail in the chapter that follows. The illustrations are done so well that one feels that the text is hardly needed.

Hardware and "software" used in sailmaking are described in Chapter 7, followed by chapters on sail care, sail maintenance, and sail repair respectively. Chapters on buying new and used sails, the construction of sail bags and sail covers, and sail handling, trimming, and adjustment complete the main part of the book.

The appendices cover glossary of terms, a list of sailmakers, riggers, brokers, and cleaners, sources of materials, a bibliography, and finally a list of other sources of pertinent information. A comprehensive index completes this fine book.

In conclusion, once more, whether or not one is considering making one's own sails, this book, in addition to the material on how to construct sails, contains so much useful information for the sailor it should have a prominent place in every boating library.



## Small Boat SAFETY



Tom Shaw

## Boating Manners

I came in from a five hour routine safety patrol on my 18' center console one afternoon somewhat exhausted. It was not that we had any nautical crisis during our tour. Indeed, the only unusual event was picking up six beer cans in a 50 yard radius. A few years ago that would not have been uncommon, but these days trash in the ICW is, happily, a rarity.

The fatigue came from the endless coping with the wakes of other vessels. I patrol at a speed of approximately twelve knots. It seems that is not fast enough for the traffic. The lookout is constantly saying, "Vessel passing to port" or "Vessel passing to starboard", and sometimes, "Vessels passing on both port and starboard". They pass fast, and they pass close. It would be easy to toss a half-filled coke

can from my boat to many of those scooting by. And so we deal with wakes as a constant.

My crewman was a better helmsman than I and we had an unspoken contest to see if we could so navigate the wakes that no spray came over the helm station. In the course of the day we both lost that contest more than once.

The IntraCoastal Waterway in my patrol area is, with rare exceptions, not narrow. Why other vessels feel a need to pass at what is clearly an unsafe distance I do not know. Nor do I know why they cannot slow a little and reduce their wakes. Perhaps, and I hate to think that this is the case, perhaps the bad manners that seem to be affecting most of our society are even penetrating the boating world. It's a sad thought.



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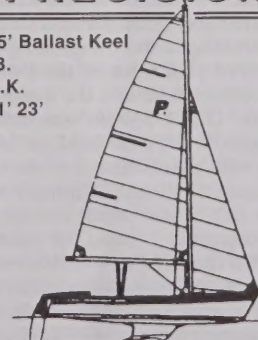
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15' C.B.  
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# You write to us about...

## Activities & Events...

### Boats, Books & Brushes

New London, Connecticut will host a Maritime Art Festival September 21-23 which, in addition to art and books will also include boats, large and small, on the Thames River Waterfront. The big boat fleet will include *Eagle*, *Amistad*, *Pride of Baltimore*, *Highlander Sea*, *Grand Nellie*, *Mystic Whaler*, *Liberty Clipper*, *Adirondack II*, *Argia* and *Sound Waters*, all but *Eagle* will race in the 2nd Annual New London Schooner Challenge on Sunday.

A flotilla of traditional rowing, sailing and paddling craft will fill in the spaces over the weekend. Two boat parades are planned for Saturday, those interested in participating are urged to request entry information from the organizers. Small craft owners who are internet connected can contact <fuzzy@hotmail.com>, larger boat and yacht clubs should contact <craigsppear@aol.com>.

For general information, visit [www.sailnewlondon.com](http://www.sailnewlondon.com) or call (860) 443-8332.

Chamber of Commerce of Southern Connecticut, New London, CT

## Adventures & Experiences...

### A Salvaged Outboard & Non-Standard Thunderbird

I had an odd experience with a salvaged, basket case old opposed Johnson twin acquired free gratis. Right off, ignition problem were evident, solved by finding and installing the outdated components. Then it would rope-start right off; period. Start and run at minimum rpm. I retraced its history to learn it'd spent a week or so on the bottom of Catalina Harbor. This necessitated head removal where I found the piston ramps vital to 2-stroke intake and exhaust missing! More questioning revealed that the former owner had pounded them flat with a hammer to free pistons! I immediately consigned it to metals recycling.

Recently someone wrote that a used Thunderbird class sloop seemed surprisingly tender. Marketing of this outstanding boat was in the form of plan sales by the Douglas Fir Plywood Association, and the majority were homebuilts. One I bought was admittedly "non-standard" with the keel an iron plate weldment with a bulb instead of the more expensive iron casting. Although minus a haulout, a sail in stiff winds revealed a safe boat. Subsequently I found the mast was fir instead of the specified spruce. As a non-racing type the boat was eminently satisfactory. After I sold it, it went through two or three hands, with one phoning that while in the slip he heard a noise and the boat jumped up in the water about 6". The bulb had fallen off. Obviously-caveat emptor applies here.

Norm Benedict, Santa Rosa, CA

## Information of Interest...

### Now a Snowmobile Threat!

Re your "Commentary" in the June 15 issue: If you think the "Solo" water ski machine is wretched, take a look at the latest craze up here in Big Sky country, running snowmobiles across lakes and rivers! You wouldn't think this possible, but I guess with enough horsepower, you can do about anything.

Not only do these things make huge wakes and excess pollution, apparently you can't even really steer them, the morons just take a running start from shore and hydroplane across the water to the opposite bank, and too bad for anyone in a canoe or rowboat who gets in their way!

Our local waterway here in Great Falls is a five or six mile stretch of the Missouri River, narrow and full of mudshoals, but it would be pleasant enough for rowing and canoeing were it not for the fact that the local cowboys think they need 400hp jetboats to navigate it. Plus, of course, the usual jetski crowd, who are especially pestilential around Broadwater Bay. Broadwater Bay isn't very broad, only a quarter mile or so from bank to bank, it was named for an early settler, Major Broadwater. It's also the only decent public launch ramp on the 100 miles between Holter Dam and Ft. Benton.

The only good news is that the Fish, Wildlife and Parks Commission is considering banning this activity.

I urge MAIB readers to write or e-mail the commission with their thoughts about this. They will listen even to out-of-staters because this poor-ass state is anxious to attract tourists, tourism being about the only thing left since the copper mines closed and drought is killing the farmers. Tell them you will not consider vacationing in Montana until this vandalism is rigorously banned. Write to: Commissioners, Montana Dept. of Fish, Wildlife and Parks, Helena, MT 59620, or email them by going to the FWP website at [www.fwp.state.mt.us](http://www.fwp.state.mt.us) and clicking the "comment" button on the homepage.

Andy Hayes, Great Falls, MT

(An accompanying newspaper clipping is titled, "State May Ban Snowmobiles from Open Water". There's no rules about this "sport" as nobody ever dreamed the need would arise.)

### Repairing Leaking Aluminum (riveted) Hulls - Some Thoughts

About once every week or two someone calls regarding a leaking aluminum riveted hull. The topic also appears from time to time on internet boating newsgroups. Solutions range from using silicon type sealers, epoxies, welding, to pounding the rivets with a hammer. Each, despite problems, has its supporters. Although I deal with epoxies, I generally back-off from suggesting an epoxy cure because epoxies are brittle and aluminum hulls flex a lot. Also, epoxies can have problems

bonding to aluminum. That said, several epoxy professionals and I have been kicking around our best guess epoxy fix ideas. Here's our current thinking:

1) Clean the aluminum seam with muriatic acid cut 50% with water. Muriatic acid is sold in hardware stores for a few dollars per gallon. The acid will help clean the surface and slightly etch the metal.

2) Flush well with water, all traces of the acid must be gone. Let dry completely.

3) Apply a very thin, watery epoxy on the seam and around the rivets. The thin epoxy should seep into the tiny fissures and spaces, filling and sealing them as well as locking loose rivets back into tightness. It will also provide a firm anchor for a topcoat of a second epoxy.

4) Between the time the thin epoxy has set up and within 72 hours, topcoat (bury) the thin epoxy and seams with a thicker, flexible epoxy. By using an epoxy with an elongation of 25% instead of regular epoxies with an elongation of under 5%, the repair should better withstand the flexing of aluminum hulls.

The epoxy products suggested for this proposed (still untested) fix are: Low V epoxy (\$36 for a 48 ounce unit which includes shipping within the USA), and Hi-flex epoxy (\$30 for a 48 ounce unit, including shipping within the USA). Both are available from me at Progressive Epoxy Polymers, (603) 435-7199 or inquire/order online at: <http://www.epoxyproducts.com/marine.html>

Paul Oman, Pittsfield, NH

### Navigator's Little Cod

"An old favorite along the Canadian coast. Built for hard usage in boats and small camps. Designed for heating and cooking and styled to reflect the traditions of life at sea."

This ruggedly beautiful cast iron stove is the result of over 80 years of refinement. Its simplicity and reliability will be a welcome addition to any galley, cabin, or pilothouse. Economical to run and maintain, this source of dry heat will be the greatest contributor to comfort aboard your yacht. The stove's porcelain enamel coating, which is available in five standard colors (plus a custom color option), will provide excellent service in applications involving salt air/water exposure. A Little Cod is a traditional solid fuel stove which can deliver, a product that has been built to last.

Height: 11.25" (28.5 cm) to top of cook surface. 13" (33 cm) to top of sea rail.

Width: 18" (45.75 cm)

Depth: 13.75" (35 cm)

Weight: 40lbs (18 kg)

Porcelain enameled cast iron, the ultimate in beauty & durability. Available in black, forest green, marine blue, charcoal grey, battle-ship grey and custom colors.

Stainless steel sea rail to keep cook pots in place

9.5" stainless steel thru-bolts and stainless steel door hinge pins

Burns wood or charcoal, 12" maximum log length.

Loaded via door on right side.

Holes in legs for securing stove to floor

Complete 4" smoke stack kit available

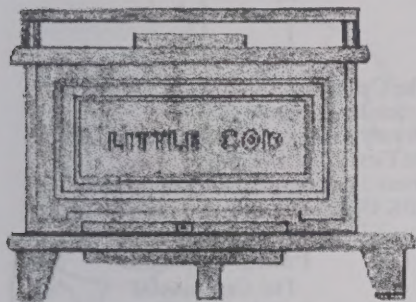
Two handles for 6" cook plates

28,000 BTU's/hr on High Setting

EPA and Washington state tests passed,

certification pending

Packed in a distinctive wooden crate  
Navigator Stove Works, Inc. 68 S. First  
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www.marinestove.com



### Internet Sailing Data Sites

I recently saw a listing of internet web sites aimed at those of us who enjoy sailing and thought readers might find this of some interest:

[www.sailnet.com](http://www.sailnet.com) - How to sail, basic sailing terms, rules, seamanship and tips for buying a boat and performing maintenance.

[www.sailfree.com/Sailboats/sailboat.htm](http://www.sailfree.com/Sailboats/sailboat.htm) - Names for the parts of a sailboat.

[www.netknots.com/boating\\_knots/boating\\_knots.html#](http://www.netknots.com/boating_knots/boating_knots.html#) - Basic boating knots.

[www.boatsafe.com/nautical\\_knowhow/boating/5\\_4.htm](http://www.boatsafe.com/nautical_knowhow/boating/5_4.htm) - Online boating safety course.

<http://tallships.sailtraining.org/> - Sailing a tall ship.

[www.harbortides.com](http://www.harbortides.com) - Tide charts for U.S. coastal waters.

[www.intellicast.com/Sail/standard\\_index.html](http://www.intellicast.com/Sail/standard_index.html) - Sailing weather with information on storms, wave heights, water temperatures and wind speeds.

[www.seatalebooks.com/index.htm](http://www.seatalebooks.com/index.htm) & [www.sailmag.com/](http://www.sailmag.com/) - Books, stories about sea adventures.

[www.hmssurprise.org](http://www.hmssurprise.org) - Books by Patrick O'Brian.

[www.gps4fun.com/main\\_marine.html](http://www.gps4fun.com/main_marine.html) - Buying a global positioning system.

[www.sailing.org](http://www.sailing.org) - International Sailing Federation site featuring news on regattas around the world.

<http://sailingsource.com/store/default.html> - Sources of sailing supplies.

Henry Hollander, Wilmington, DE

## Information Wanted...

### Looking for a Better MITA Monitor

The Maine Island Trail Association has created a lot of interest with their search for "the perfect boat" for the Trail, as prompted by Ben Fuller's beach cruiser. As a volunteer MITA Monitor Skipper I'm impressed with the 18' Lund SSV Fisherman Tiller model we use for our stewardship program. But, after attending the Maine Boatbuilders Show, I'm wondering if there might be a small boat builder who has a model, wood/fiberglass, whatever, that would do as well or better. The original MITA Lund now has over 12 seasons of ser-

vice with many skippers, and is still going strong. We are blessed with the use of 25hp Mercury four-stroke motors that we use "stand-up" lobsterman style. Perhaps your readers can suggest alternatives in a competitive price range.

Merv Taylor, RR4 Box 35, Lincolnville, ME 04849

### Marsh Cat Info Wanted

I have been landlocked for 18 months in Bend, Oregon up in the high desert, beautiful country but dry. Soon I am heading back to my home in Port Townsend where, in the driveway sits a pretty Joel White Marsh Cat, cold molded in redwood.

I was wondering if any readers have sailed this boat, I have some questions about design ballast, and also am interested to know if drawings are available from which I might pick up the waterline. I traded my H-28 Vayu to the builder of the Marsh Cat.

David Brunkow, 1465 NW Ithaca, Bend, OR 97701, <dbrunkow@coint.com>.

### Scout Camp Sailboats

I learned to sail at Ownssee Scout Camp on Big Blue Lake in the '30s. We had wonderful wooden cat rigged sailboats. I am now wondering if anyone knows anything about these sailboats, their manufacturer, availability today, etc. If you do please contact me. Thank you.

Lawrence Seeger, 1280 Rudolph Rd. Apt. 2G, Northbrook, IL 60062, <LSeeger@iopener.net>

## Opinions...

### Bravo

Bravo for your comments in the August 1 issue on small boats in conflict with powerboats. Your commentaries are most of-ten interesting and cogent.

Jack Dice, Stonington, ME

## This Magazine...

### Getting It Right

Thank you for the free sample copy of *MAIB*, good to get a look at your interesting publication that is obviously meeting a demand and has stood the test of time. Congratulations for coming up with a winner and getting it right for so many enthusiasts worldwide. Enclosed is my subscription order.

Ian Walker, Picton, NZ

### Note of Appreciation

This note with my renewal for another year is to let you know that I appreciate all the work you and other writers are doing putting out this fine publication. When politics and the daily routine get me down I can usually find something in a back issue to occupy my mind with more important things. I am glad to see each new issue arrive in my mailbox and I hope things will continue good for you and

### Old Boat Disposal

You are right about the difficulty encountered in trying to dispose of an old boat (Commentary May 15). I had the need to scrap a 25' Chris Craft cabin cruiser and found the local dump wanted to charge me \$600, citing hazardous paints, fuel tank, the usual litany. What to do?

Well a chain saw solved my problem, amazing how quickly that old boat became small pieces of wood and fiberglass which the dump accepted for only \$40.

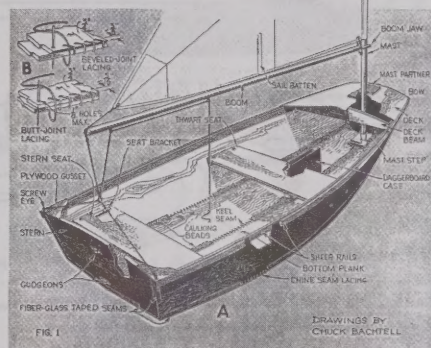
On another topic, I found the enclosed page from an old *Science & Mechanics* featuring a Graefin-10, a sailing pram. I don't recognize the designer's name but surely this must be one of the first stitch and glue efforts (Vikings excepted) back in 1964.

George Bement, San Jose, CA

## Graefin-10

Sailing pram, ideal for  
learning the basics of sailing,  
is also fun for  
more experienced sailors.

Designed By Will Graef



yours and am looking forward to enjoying another year of your excellent work.

Don Bergst, Folsom, CA

### More Powerboat How-To

I remember writing that I was somewhat underwhelmed by my reading the six trial subscription issues, but am ordering my subscription anyway while stating I would like to see more power boat how-to stuff. My problem now is in trying to not read it all at one sitting, but rather make it stretch over the two weeks to the next, too long to go without a fix. Robb White is far and away my favorite, I also enjoy Dave Carnell.

Now I have to get back to trying to get the steering rod out of the steering tube in my Whaler. There was no problem with the cables, but the steering head had developed too much play from the annual stress each spring "breaking" the steering free. Maybe I should write this up, "Steering System Blues".

Gene Holden, Raleigh, NC

A compendium of selections from newsletters and magazines we receive which, we believe, illustrates what is going on out there in the world small boats.

### Journal of the Historic Canoe & Kayak Association

Newsletter #37 - Spring 2001

34 Pages

Tony Ford FRGS, Am Kurpark 4  
37444 St Andreasberg, Germany

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### Feature Article

#### The Ceremonial Building of a Waga

By Bronislaw Malinowski

This 15 page feature article is an ethnological study of the building of a large indigenous sailing canoe by eastern New Guinea natives, complete with a number of "spells" cast on the craft during its construction. Fascinating for anyone looking into the origins of small craft around the world.

### Short Sample Article

#### PBK Gone West

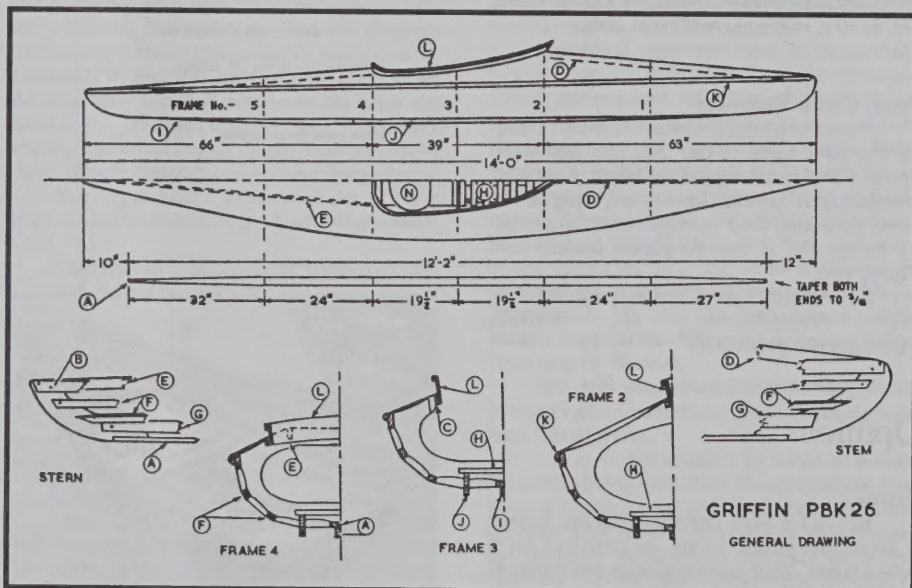
By Percy Blandford

We thought PBK boat and kayak plans had come to the end of the road and we should call it a day. A total of around 165,000 plans (about one-quarter kayaks) sold in fifty years must be a world record.

For nearly twenty years the plans have been printed and sold by my friend Bill Harrison. He found sales falling off and barely covering the cost of advertising, so we felt the time had come to pack up.

We have always sold plans world-wide and we once had several agents in the USA. The only one still taking plans (mostly kayaks) after 30 years is Clark Craft, 15 Aqua Ln., Tonawanda, NY 14150, USA, (716) 873-2640. When Gary Wylegala, the proprietor, heard we were packing up, he asked if he could take over the whole 50 plans. Bill Harrison made a final printing to build up a small stock to cover anticipated demand in the next few months, but all the tracings and paperwork have now gone to Clark Craft. As far as Britain is concerned, there will soon not be any more PBK plans available here. Tonawanda is at the northern tip of New York state near Buffalo and Niagara Falls on the Canadian border.

The oldest design still in the catalogue is PBK10, an 11' canvas-covered kayak, with the prototype built in 1947. After World War II there was a paper shortage and no new magazines could be started. If a magazine had been closed because of the war, it could be revived. *Canoe & Small Boat* was one of these. It was restarted by some men with foreign-sounding names, who put lengthy obscure political articles in it with a smattering of canoeing information. It did not run for many issues. At the time there was no long wood, waterproof plywood, waterproof glue and no adhesive for canvas on the market. *Canoe & Small Boat* published my design for the 11' PBK11 (The first use of PBK), which allowed for these shortages. The reaction was terrific. As supplies got better, I redesigned it and it became PBK10 - the first of a long line.



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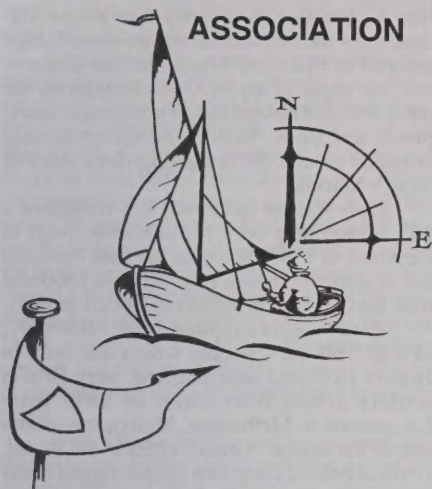
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## DINGHY CRUISING ASSOCIATION



### Bulletin No 171- Summer 2001

<http://www.dca.uk.com/>

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### Of Special Note

The calendar of Forthcoming Rallies & Events lists 32 of these gatherings between June and October in East Coast, South Coast, North-west and Northeast districts, a fantastic amount of organized messing about in small boats. Many are subsequently reported in the Bulletin.

### Feature Articles

Interlude in a Dinghy  
Sabine Visits Scotland Part 2  
Cruising on the Dole Part 3

Three detailed cruising tales that capture the spirit of small boat cruising as practiced by these dedicated Britishers.

## Short Sample Article

### A Sliding Gunter

By Gerald Levenson

Reproduced from Bulletin 107

A gunter rig offers several advantages for the dinghy cruiser; but there are some snags, especially when the gaff is lowered. If a gunter gaff is lowered for reefing, it is no longer held tight to the mast by the halyard, but sags away at a wider angle. The sail becomes partly scandalised and loses efficiency. In a sliding gunter the gaff is lowered while keeping its vertical alignment. The Otter dinghy gaff stays in close contact with the mast, retaining the proper shape of the Bermudian sail.

There are several ways of achieving a sliding gunter. My approach for the Otter dinghy was to fix to the top of the mast a bracket within which the gaff can slide. The bracket is part open at the rear to allow the mainsail to pass.

The bracket was made, with the aid of a blowtorch, from a strip of stainless steel 1" wide and 1/8" thick. This was bent into a U-shape to make a snug fit over the stainless steel masthead fitting to which the shrouds and forestay are attached. The free ends of the U were then closed in at right angles (while red hot) each side. See the diagram. The U-bracket is held in place by a through-bolt in place of the wood screws that originally held the masthead fitting on each side.

The wooden gaff has a square section and is slightly tapered towards the top. The side-ways slack between the U-bracket and the gaff is taken up each side by a thin packing of anything which will not chafe the varnished gaff. I use a thin piece of plastic each side, wrapped in place by a couple of turns of PVC tape.

As soon as the gaff halyard is loosened and the gaff drops a little, the halyard itself becomes sandwiched between the gaff and the mast, and this must be allowed for according to the diameter of the halyard, probably six or seven millimeters. See the diagram. It is true that the front of the gaff could be hollowed to accommodate the halyard but this is asking for a jammed gaff, and it is better to keep things simple.

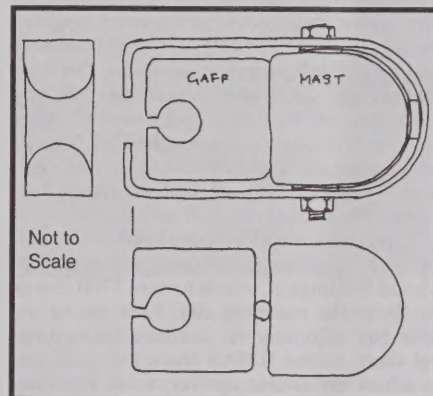
A small Tufnol pulley is tied to the top of the gaff for the mainsail halyard, the down end of which passes through a clamcleat screwed to the heel of the gaff. This is preferably a bridged clamcleat of alloy. The plastic ones quickly lose their grip as the teeth get blunted by chafe on this job.

The gaff halyard is cleated on the side of the wooden mast as usual, but it is convenient to make a fixed loop in the halyard at a point which will fix a safe bottom position for the gaff, so that the latter can be dropped in a hurry without danger of crashing and splitting the jaws. The loop should be of a size that can be passed over the cleat with a squeeze, and left there without its falling off. When the gaff is to be taken down entirely, the loop is brought off the cleat.

All this may sound incomprehensible save to those who have a gunter. For these it will all be self-evident. This sliding gunter on the Otter has all the properties of a conventional Bermudian mast, plus the advantage that in a hard blow the mast can be shortened, saving dead windage. Reefing can be done in a jiffy. For a small reef the gaff can be left where it is at full height. If the weather calls for deeper reefs, the gaff can be lowered to taste. In the extreme, the bottom batten will have to

be removed to roll the sail.

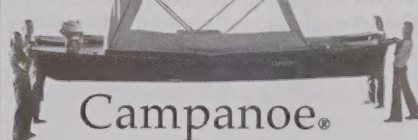
A word on a burgee for a gunter. This can take a hammering on a cruising dinghy when the gaff is brought down and tumbled into the boat. I beat this problem by flying my Dinghy Cruising Association burgee on a 15" length of 1/4" nylon rod. This bends easily to any angle without harm, and always springs back. It is a push-fit into a short length of stainless steel tubing screwed to the top of the gaff.



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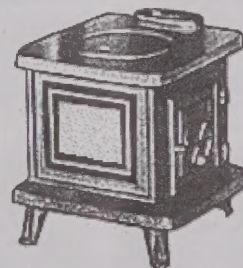
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Perhaps the Australian Wooden Boat Festival in Hobart should be called the Tasmanian Wooden Boat Festival since several other Australian states have similar festivals. The Hobart festival happens every two years. The fourth was in February 2001 with a welcome change of date from spring with its equinoctial gales to late summer.

All the same, I wish they had launching ramps at the venue, as they had promised. The sail to the site was very brisk and the return trip brisker. After a four-hour Friday afternoon drive from Devonport, on the north coast of the island state, I had to launch my 10' clinker dinghy two kilometers away up the Derwent Estuary and sail around a point into the bay where the enclosed city docks nestled. After chatting to a couple preparing their 16' Murray Isles trailer sailer and finding the skipper had recently applied for a job with me (that's Tasmania, it's a small place), I set sail.

Immediately I comprehended the full strength of strong gusts coming down from Mount Wellington, which towers 3700 feet or so above the maritime city. I ran out of the little bay adjoining the decommissioned naval shore station HMAS Huon and soon had to adjust my course upriver, away from my destination, to reduce chances of gybing. After a few anxious moments I decided to go for it. I didn't want to return Saturday morning and try again. I was hoping to get in early and find a good spot to display my dinghy afloat for sale. I also had two free tickets to the wine and cheese opening ceremony. I did a couple of broad reaches to get around the point downstream and then turned towards the inseparable mountain and city. I tacked into the bay where ships large and small berth alongside the central business district.

Back in the 1960s, the piers would have been awaiting apple boats to carry the harvest to Europe, but the Apple Isle (just the opposite of the Big Apple) is now the clean/green isle diversifying its agriculture. That causes new problems every day as entomologists like me try to keep pace with the new pest/crop combinations and find clean/green methods of pest control to justify the claims. You may soon taste our hemp seed in imported ice cream,

## Tasmanian Wooden Boat Festival

By Lionel Hill

but we will have to wait until our laws are changed before it is legal here. The balanced lugsail and traditional dinghy hull took care of me, although I started to hear ominous woody creaking as I beat into the dock bay.

Eventually the cause of the creaking made itself known. I had feared that mast pressure was about to split a garboard strake, as in a horror tale I had heard of one boat on its maiden voyage. It was merely the hastily made accessory mast step straddling the original, and which I was trying out in an attempt to reduce the mast rake, splitting into two pieces and leaving the mast all askew. There I was, looking very unseamanlike and about to enter the Australian Wooden Boat Festival.

There were already many masts jutting above the marina wall. Well, there wasn't time to worry about dignity. I scrambled to find the problem, lower the sail, and restep the unstayed mast in its tried and trusted step. Luckily no other damage had been done. No strakes were punctured. No split had appeared in the bow thwart through which the mast steps.

I set sail again with the strongly raked mast, and I'm sure the boat heaved a sigh of relief to get back to what must be its intended rig even though it violated my preconceptions of appropriate rake. Some nautical decorum was restored by tacking neatly through the awkward entrance to the new marina lying outside the old square, enclosed, city docks, Constitution Dock and Victoria Dock. The fishing fleet had been crammed into the latter so us show ponies could promenade and pose in Constitution Dock.

The new marina encloses one side of Elizabeth Street Pier where the apple ships, and possibly migrant ships, once berthed. The warehouse is now fitted out with apartments and good-life restaurants. Not such a bad job and better than the current project to convert concrete grain silos on another pier into apartments. I think they will always look like grain silos with boxy extensions. Any waterside buildings that haven't been converted into apartments and restaurants have become maritime museums, art galleries, or flea markets.

That afternoon the bark *Endeavour* had sailed north from North West Bay in the

D'Entrecasteaux Channel along with *Enterprize* and *Lady Nelson* while I was still driving. As I tacked so cleverly into Kings Marina, I saw the two smaller square-rigged ships moored to Elizabeth Street Pier but *Endeavour*, the apple of my eye, was berthed on the other side and hidden by the warehouse apartments and cafes. Wooden keelboats already crowded around the remaining three sides of King's Marina.

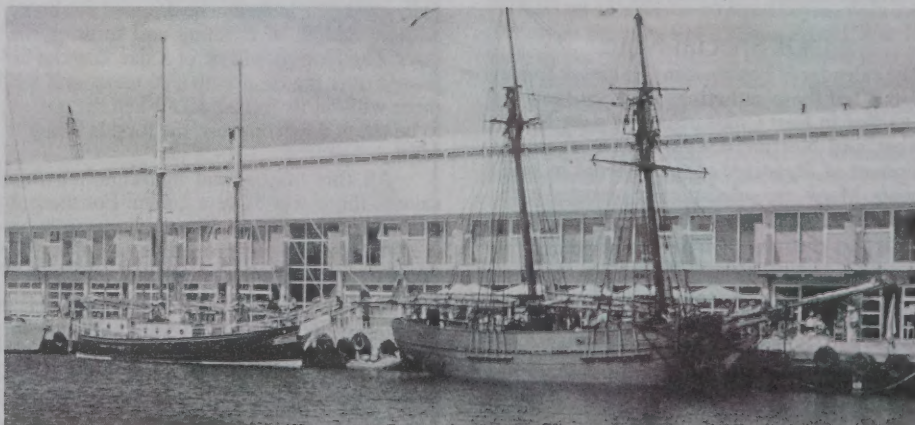
*Lady Nelson* (pictured) is a replica of a 60', 60-ton brig with centreboards, built at Deptford in 1799. She was the first vessel to sail eastwards through Bass Strait in 1800 and took the first British settlers to Hobart in 1803.

*Enterprize* is a replica, built 1989-1997, of a 53', 60-ton schooner which was built in Hobart 1830 and took the first, very British settlers across Bass Strait in 1835 from Launceston to Melbourne. Melbourne is now one of the largest "Greek" cities in the world. Berthed behind these two square-rigged boats was the smaller fore-and-aft charter schooner *Sea Cloud*, recently purchased by the abalone-diver-turned-plumber-turned-charter skipper from whom I bought my dinghy a couple of years back. It had been the tender for his ketch *Sea Dawn* and a sailing dinghy for his daughters. He had told me that the dinghy was built on Bruny Island, just south of Hobart, a mere 20 years ago.

D'Entrecasteaux Channel separates Bruny Island, with its slender isthmus, from the Tasmanian mainland. A century ago it sheltered, from the Tasman Sea, many trading ketches carrying timber and produce from the Huon River northwards to the deep water port of Hobart. Shipwrights Point Wooden Boat School, mentioned in previous issues of *MAIB*, is on the Huon.

The little dinghy that I had bought for my son in a rush of enthusiasm and was now hoping to sell was made of King Billy Pine, one of the native Tasmanian conifers. The recently split mast step was made of another native conifer, Celery Top Pine. The more workmanlike breasthook was Huon Pine, the most prized and rot resistant of our native conifers. It is also more sweet smelling than the softer King Billy Pine, so much so that woodworkers now sell little parcels of their shavings at nearby Salamanca Market.

Finding a good spot to attract buyers was not easy. Passing through the little lift bridge at 5:00 pm on Friday before the long weekend, I found that Constitution Dock (pictured) was already lined on four sides with boats. Somewhat overawed, I snuck in between a cute cabin launch *Swell Time* and a gracious



day-sailer where a pontoon bearing the substantial but aerial *Kookaburra*, an old lighthouse mail cutter, facilitated access up the high wall onto the dockside.

I watched some winsome sea scouts (pictured) rowing, admired a lovely Caledonia type yawl being rowed from a standing position, and admired *Norfolk*, a replica of the chubby 35' boat that Lieutenant Flinders and Surgeon Bass sailed from Sydney in 1798 to demonstrate the existence of Bass Strait between Tasmania and mainland Australia. Finding the registration desk unprepared, I headed for that free wine and cheese ceremony in the Grand Chancellor Sheraton Hotel. This edifice had recently popped up opposite Victoria Dock, minus a few stories after some public uproar. It would probably be my only chance of ever entering this palatial hotel as a bonafide guest.

Well, I was a bit late and it appeared that the 300 or so guests had already consumed all dozen bottles of wine. When they introduced the state treasurer to the speakers' platform, I decided to find my room at the Shipwright's Arms Hotel and clean up for a dinner with Devonport friends celebrating their wedding anniversary. This 1850s hotel, its bar complete with navigation lights, perches in the desirable and historic waterside suburb of Battery Point (where a battery existed a long time ago to fend off Imperial Russia).

My friends had come south for the food more than the boats, but I was glad of their company. I was glad I had booked a room. A couple of weeks later, returning for business when USS *Very Large Aircraft Carrier* was overlooking town, with 5000 sailors on R&R leave, the city was even busier. I could not find a room in Hobart or outlying towns for a 30 km radius!

Next morning I set off early with my camera to take snaps for that wonderful un-American, un-glossy, inexpensive magazine *MAIB*. Finding a good spot to attract buyers was important because sale signs were not allowed on boats. The system was to pay an extra \$40, on top of the \$25 dinghy afloat fee, to have a discreet sign placed on a board in a corner of the registration room, which was also stuffed with beautiful models and people fully absorbed in looking at them. Although I had been told that half the boats there were probably for sale, I found only ten signs on the notice board, but at least mine was there. Nic Compton, in *Classic Boat* 155 (May 2001), reported that 280 of the 300 boats on show were Tasmanian.

Saturday passed unpromisingly. I took advantage of my unstayed rig to lower mast and row out of Constitution Dock under the lift bridge, and hold my own personal concourse d'elegance in Kings Marina. I then slipped right out of Kings Marina around to the far side of Elizabeth Pier to admire *Endeavour* from the water. I never did get to do a tour of this lovely vessel because I was anxiously hovering around my "dinghy for sale." Luckily I had seen inside *Endeavour* several years ago and still recall my astonishment at the cramped quarters.

Watching hopefuls, comics, and would-be Vikings build their "quick and dirty" boats from a ration of plywood, nails, string, and Sikkaflex provided entertainment around lunchtime. The two-paddle trireme was fun. The audience was gloating over how many buckets of water and flour bombs they would

be able to throw over these hopefuls during their race on Monday as they passed through the dock entrance. But there were no dinghy buyers.

The summer weather was fine and a welcome change from the spring gales that plagued previous festivals. At the blustery previous festival we had held the inaugural meeting of Australian members of The Arthur Ransome Society (*Swallows and Amazons* and all that) which, if modest, proved very successful and led to our own newsletter and get-togethers.

Sunday morning was sunny and gentle but wasn't looking terribly hopeful for boat sales. I took my dinghy out onto the confined waters of Constitution Dock where several hire dinghies were rowing, models were sailing, and a clever 12' face-forward-cockpit-style Marples trimaran was buzzing around in the fluky breeze. This must have done the trick. The little dinghy is certainly handsome, with its Sikkens oil finish, sheer and green, raked lugsail. She glided around the confined water picturesquely for an hour or so.

Two buyers approached me as I returned to dockside. One I recognized from the couple that I had passed on the water as they tested a less roomy, spritsail dory. The husband was terribly apologetic about not being to pay me entirely in cash. While we were settling the sale we went to look for his model ketch in the display room, only to find that she was out being sailed in Kings Marina (pictured). At 9' with bowsprit she was almost as long as my dinghy! I had admired many non-sailing models on display but had never been much taken by the modern Bermudan sloop models that I had seen on the water during the weekend. Seeing this beautiful ketch romp in a brisk breeze opened my eyes to why some people have a passion for models.

As soon as the sale was decided it seemed that my poor neglected dinghy (I have another, a copy of Arthur Ransome's *Swallow*, complete with 6" keel, which I usually sail) took on a new life. Louisa, the daughter of friends from The Arthur Ransome Society (TARS, clever, eh!) had gotten bored watching her parents decorate their "quick and dirty" boat race entrant and asked if she and her friends could row "my" dinghy around Constitution Dock. I directed her and her dad to the new owner who was happy with the idea. I knew Louisa was not a duffer, although some of her friends proved a bit of a worry.

After they had rowed around placidly for a while they were hailed by a decidedly theatrical couple in pirate costume and a tiny dinghy. The she pirate, a Nordic version of Missee Lee, kindly equipped them with pirate costume, including hooked fists, and between bouts of berating her poor oarsman with foul oaths as she stood uncertainly in the stern, bombarded the four ecstatic children with water bombs. Quite a few onlookers also were berated and bombed. The children, of course, responded enthusiastically using the several balers from "my" dinghy and proved its stability beyond doubt as they spouted pirate oaths and splashed. I just crossed my fingers, they were all wearing life jackets, and prompted their father to borrow a dinghy and row out to remind the four not to stand on one side together.

By late Sunday I decided that I had enough of the festival, that I would not wait till Monday to see the "quick and dirty" race



or various sail-bys. I bailed several gallons of water and deflated balloons from the dinghy to prepare her for the trip north to Devonport to await transfer to the mainland. By now the breeze was Substantial on the Beaufort Scale, gusting occasionally to Unnerving. I had a few things to do, sail the dinghy around to the distant ramp, walk back, drive my car to the ramp, and tow my 8" wheeled trailer with no spare (it being locked in a repair shop after a puncture coming south) to Devonport on the infamous Bass Strait (it seems everyone lives near a treacherous body of water).

Once again the placid balanced lug and traditional hull took care of me. There was quite a chop as I rowed out from Kings Marina with the tide and breeze at odds. The *Queen Elizabeth II* had just departed from the point between the ramp and me and added to

the confusion of waves. Louisa's father, who has a utilitarian spritsail yawl of 16', hailed me from the marina and said he hadn't had much chance to see the dinghy under sail, he had been preoccupied with that "quick and dirty" boat. I wasn't about to do any demonstration sailing. I was anxious to get my buyer's dinghy home with all spars intact. It was mostly a reach and then a run. The little dinghy romped out of the bay and a couple of broad reaches took her past the *QE II*'s empty berth to the next bay and my ramp.

A few weeks later the man who sails my buyer's model ketch (imagine having a skipper to sail your model) called to take the dinghy in a van across Bass Strait on the car ferry to the fast lane mainland. Now I want to sell that other boat I acquired in a bout of enthusiasm. It is a 16' Hartley trailer sailer of 1970s

vintage, a beamy, double-chined, three-quarter sloop. A yachtie friend assured me that it was just the thing for taking my son camping, but we are both en-suite campers and day sailors. I'll keep *Swallow*, the "keelboat" dinghy that has responded well to the recent addition of a leeboard. One wooden boat creates enough storage and maintenance issues. Enjoy the sun and fair breezes in the northern hemisphere.

Lionel Hill, 63 Lawrence Drive, Devonport 7310, Australia, hill@southcom.com.au



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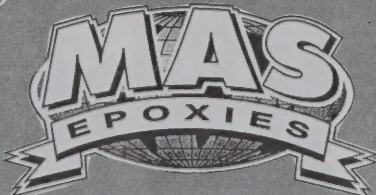
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The lower limit of the area where it is legal to take bay scallops in Florida is currently the Suwannee River. When I was living in Palm Harbor in the late 1980s it was legal to take them down off Anclote Key, just west of Tarpon Springs. I read about the scallop season in one of those breezy articles they run in the back of the sports section of the Tampa Tribune. I thought, "Why Not?"

My son, Andy, and I got our snorkels and masks out of the closet and found we didn't have a dive flag. I got out some red, rip-stop nylon left over from another project and we took over the kitchen table on a Friday night to make a diving flag. I hand stitched around the edges, set two grommets in the corners, and used a strip of sail mending tape to make the white stripe. All out of my sail mending kit, bigger, and a lot cheaper than the store bought plastic flags in the boat stores.

We got up early on that July Saturday and hooked the car to our 20' fiberglass sloop, *Jean Marie*, that lives on her trailer in the side yard. I had topped the gas tank the night before, all six gallons, and we put the ice chest with lunch and the jug of frozen water in the cabin and off we went. The trip to Pop Stansell park on Sutherland Bayou takes less than five minutes and we have the little park with its sand ramp and wooden fishing pier all to ourselves. I take the time to rig the mast and hank on the jib. We plan to motor up to Anclote Key, but like all rag baggers, I have been betrayed by my outboard before.

This time the four horsepower Evinrude Yacht Twin with its long shaft starts on the third pull of the recoil starter. We use the outboard spun into reverse to back away from the fishing pier that doubles as the boat dock. The sky is now clear blue and the sun is coming up over the land as we motor out of the bayou past the mangroves and the oyster bars. The temperature never drops much below 70 degrees in the summer in this neck of the woods. We can see the huge homes built on stilts off Seaside Point with the glass doors closed and the air conditioners running full blast. Andy rigs the bimini top up over the cockpit and we sort out the extra cushions until we are comfortable. The water is shallow around here and I keep the swing keel up. With the keel up, the 20', 2000-pound Montego, built in St. Petersburg, draws about 18". The rudder has a kick-up blade of fiberglass and has been patched on the edge a few times.

We clear the end of the bayou channel, slip easily into St. Joseph Sound, and turn north toward Anclote Key and the wily bay scallops. Off to port are a series of small party islands labeled "spoil" on the chart. They were piled up when the intracoastal waterway was dredged. The islands have sand beaches, small coves, Australian Pines, and mangroves. The interior of each is littered with beer cans, broken glass, and old campfire remains. Farther off to the west is the green backside of Honeymoon Island. This is a great island state park with a causeway leading to it. The south end of the island is developed with the picnic areas and bath houses. The park rangers keep it safe and clean for families and tourists. The north end of the island is mangroves with small patches of beach reached after hiking through the woods with tall pines and palmetto palms. The fishing is good off the grassy flats on the eastern, protected side of the island.

As we motor north we can see a long, curving sand island that is covered by tall

## Scallop Hunting at Anclote Key

By Hal Schmeizer

waving grasses. The place is called Three Rooker Bar and is a favorite anchoring spot for the big power cruisers that blast up the intracoastal from Clearwater and points south. From time to time several small ultralights fly out and land on the long sand beaches. Andy and I have seen schools of Tarpon with their tails and fins showing in the two mile pass between Three Rooker Bar and Honeymoon Island.

We keep our eyes peeled as we purr north with the outboard at half throttle. This pushes our little sloop at hull speed and only uses one half gallon per hour. We have found that this boat with its cockpit shaded by a bimini top, the stability of the 500 plus pounds of keel, and the open cabin top and fore deck makes a great fishing platform. Sometimes we fish and sometimes we just sail, but always we look at the astounding variety of sea life

St. Joseph Sound is just at the end of the intracoastal and despite the continuous building and population growth the marine life is still present. We have sailed up on huge green sea turtles basking on the surface and then watched in awe as they rocket off to the bottom. How can something so big and slow looking move so fast? The porpoise are very much in evidence and we have had them swim off our bow and pace us. The pelicans and the seagulls and the diving ducks come and go without even looking at us as we get closer to Anclote Key. The Sea Pearls were built near Tarpon Springs and there is a covey of them that moor off Klosterman Point. Chasing Sea Pearls with their tan bark sails and open cockpits is great fun and they really dress up the area.

Anclote Key is a state park and has an abandoned red lighthouse on the south end. Anclote Key also guards the entrance to the Anclote River that leads right into downtown Tarpon Springs. We get to the green flashing buoy number 41 that marks the end of the intracoastal waterway and start looking for a place to start the scallop hunt. We see quite a few small power boats anchored in the grass flats with diving flags waving from their radio antennas. I throttle back the outboard to a mutter and we glide quietly through the anchored boats and swimmers. There are a lot of people in the water with the orange tips of their snorkels and the round bulging of swim suit bottoms as they dive down to the bottom.

The water here is bath warm and crystal clear. The bottom is waving brown grass with white sandy patches. Occasionally a long clear streak shows where someone blasted through the grass on a low tide with a fast prop. Andy goes forward and drops the anchor and chain. We keep the anchor and line up on the bow pulpit in a piece of white pvc pipe banded upright. It works well and keep the anchor and line out of the way when we are sailing.

I rig our rope and wood ladder off the back and we jump off the stern into the water. Heaven.

The sun is well up, its about 9:30 in the morning and there is just a hint of breeze from the northeast. We have short sticks to stir in the grass and net bags to put the scallops in. The scallops are there, but it takes some effort to find one hiding in the top of the grass. If you are not careful with the draw string on your bag, the scallops will swim off. It is amazing to see a shell that looks like a gas station sign swimming off by pumping water through its shell.

Stingrays are in the white sand patches and leave swimmers alone. If you step down on one they lash around with that nasty tail and the barb gets you. No troubles today as we give them a wide berth. After we swim around for about an hour we get used to them and quit worrying. Getting back on the boat is a real chore. Even with our salty looking wood and rope ladder it is work. I resolve to look into a fixed ladder on the stern.

We sit in the shade of the bimini top and drink cans of icy cold soft drink and it's great. We don't get more than about two dozen scallops, but that's all right. The thunder clouds are building up for the afternoon deluge off to the east over the land. The air is hot and the metal parts of the sloop are too hot to touch. Welcome to boating in the Florida summer.

The ride back is uneventful and the ramp is clear for a quick retrieve to the roller trailer. I get the mast down after the boat is on the trailer. I keep one eye on the clouds and hustle getting the mast down. We lose lots of boat-ers every year from the lightning. Last month a young man taking down the mast on his Hobie Cat on the causeway to Honeymoon Island was struck and died before he could get to the hospital.

Back at home we back the trailer in and hose down the whole rig with fresh water. I have built a huge wooden gate/fence in front of the boat to keep the home owners association happy. We close up the gate and go in to clean our catch.

The scallops are small and not too many. I shell and clean the white meat portion. We sautee them in butter on the stove and stand around in our bare feet and swim trunks eating them off forks. The shells go into my wife's sea shell collection, and the trip goes into Andy's and my memories.



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"Don't get out of the car!!" the Auburn, New York cop yelled as a second cop car pulled up, lights flashing!!

It had come to this because I've always wanted to take a canal boat on European canals for a week or so. But being the cheap-skate that I am, when I received a brochure from Mid-Lakes Navigation on the New York canal system, I said why not? But, I'll take along my micro cruiser, a 14' Peep Hen, *Julie II*.

So we started off on July 14 from our home town of Etowah in the North Carolina mountains and in due time arrived at Barrett's Marina right by Seneca Lake in New York's Finger lakes District on the Seneca River. The folks there were great as they just charged me for launching the boat and let me park my car and trailer safely in their lot no charge for our week's holiday.

We sailed away to our first lock at Waterloo (my mast goes up and down in seconds) in a nice 5 knot breeze. Nearby residents were watching as I think they do not often see sailboats actually sailing up their river. After locking through, we motored up to the town of Seneca Falls after just two hours. There were some 40 boats already tied up at the docks so we tied up to a tree across the river and crossed over the nearby bridge.

Spotting a European style canal boat, we talked to the family of six that had rented it, they told us they had loved the experience so far. They showed us around onboard and it did

## The Little Boat Who Could

### Mini Canal Boating On the Erie Canal

By Robert Nelsen

look like a fun way to travel the canals, but a mite expensive for us at \$2,600 for the week!

We walked downtown on the main street lined with stores of one story facing the street and two stories out back lining the canal, and enjoyed a meal at a great Italian restaurant, Avicollis, reasonable and excellent. Our first night afterwards under the stars onboard *Julie II*, with gas lamps lighting the far bank and music from a cafe playing, was wonderful.

We learned that the reason for so many boats being in town was that New York state was having a cruise and bike tour from Albany to Buffalo, and as luck would have it, here they were tied up at Seneca Falls when we arrived. We found ourselves joining their tour as we headed west, they sort of took us in as we had by far the smallest boat.

After bagels at a cafe overlooking the Seneca Canal waterfront, we motored into beautiful Van Cleff Lake past an old stone Episcopal church, and joined a canal boat

waiting to lock through a double lock that led to a four mile cruise to a lock that opened into the Montezuma National Wildlife Refuge. This area was originally quicksand and mosquitoes in 1821 when Irish workmen on the canal had to wear smudgpots stuffed with smoldering leaves around their necks, called Montezuma Necklaces, to ward off the mosquitoes. Conditions were nearly impossible, with mud falling into the ditch and malaria felling workers, until fall arrived and progress could resume.

Mid-morning we turned left and headed west on the Erie Canal, where, after two more locks, we tied up at Clyde about 1pm. There was no real waterfront dock but we managed and ate at a local cafe. All the others in the cruise passed on by. We moved on another 12 miles after lunch to Lyons where we tied up at a real nice canal park with the cruise group again.

On a walk around town, after enjoying take out Chinese at a park picnic bench, we learned that many of the Italian and Irish immigrants who worked building the canal settled in the towns that sprang up along the canal.

The next morning, underway by 9:45, we soon arrived at a lock at which (as we had encountered on a trip from Norfolk, Virginia to Elizabeth City, North Carolina on the Dismal Swamp Canal, where we had to provide long lines to reach the 20' fore and aft spacing between the lines in the lock) we had a tough time with our 14' boat holding onto the lines.

## About Our Boat

Our boat is a 14' Peep Hen which we have had for 12 years. It weighs about 650lbs, with a loaded trailering all up weight around 1,000lbs. We originally towed it with our 1983 4 cylinder Toyota Tercel from our home in the mountains of western North Carolina.

It draws about 10" with the centerboard up, about 2' down. It takes me about five minutes to launch from the trailer at a ramp and tie it off to an adjacent dock while I park the car. I raise the mast myself in minutes. The gaff rig sail works great and the boat's appearance draws smiles, laughs and favorable comments, as we experienced on the Erie Canal trip. It's like a cartoon on the water.

We sleep in the cockpit most of the time on our local sailing, but there are quarters belowdeck with sitting headroom and storage. The boat was designed by Reuben Trane, who was 6'5". You can't beat sleeping under the stars anchored in Charleston harbor with the mast slowly swinging in an arc, or awakening at 4am as 30 shrimp boats leave the harbor, one every three minutes stretched out between Fort Sumter and Shems Creek.

Yes, we'll put our little *Julie II* up against any boat for pure fun messing about in boats.



Our cruise friends soon offered us a hand suggesting that we just hold onto the outsides of their boats. While I sometimes wondered if they perhaps pitied my wife trapped in this tiny craft (theirs were 25-40') they did seem to enjoy having us along after a while.

This morning we held onto a converted 46' sailboat a young couple had bought damaged from Hurricane Hugo in the Virgin Islands. They had removed the mast and built a pilothouse on deck, and told us they had to earn only \$9,500 a year to be able to cruise.

Arriving later at Newark we were met with TV cameras and offered free hamburgers, soda, etc. at the waterfront park, along with about 30 of the cruise group boats. We even were given T-shirts as the welcomers assumed we were part of the official cruise group. It was great! As the other boats left town we headed the other way, walking into town and viewing many beautiful Victorian homes in immaculate shape despite the harsh winters.

After lunch we left for Palmyra about 10 miles away, motoring along at maybe 4-5 knots with our little 3-1/2hp Nissan outboard. What other boats we did see usually were passing us. After tying up at the Palmyra lock we walked a half mile into town past more of the Victorian architecture. Some of our new friends were headed for the Joseph Smith farm, site of the annual Hill Cumorah Mormon Pageant.

We moved on about 5pm headed for Fairport about 11 miles away. While we trundled along at 4-5 mph most other boats passed us at twice that or more. The canal has a 10mph speed limit and someone mentioned wondering if anyone ever got a speeding ticket. When we arrived at the next lock we'd find boats that had passed us waiting for the lock to open. The lock master must have called ahead to alert the next one that there was one small boat trailing along behind the bigger, faster ones and they'd wait for us. I apologized for being so slow but the lockmaster only laughed, he must have been using us as a way to encourage the others to slow down some.

We noticed the zebra mussels on the lock walls and in the clear water of the Seneca River. I was concerned about bringing some home to North Carolina on our boat after the trip, but the marina people told me that if the boat is out of the water more than a week it would not be a problem, and that in the salt water at Charleston, South Carolina where we do most of our sailing that we need not worry about them.

We followed one of the Mid-Lakes European type canal boats into Fairport in the early evening, which we found to be an ideal port, with docking for easily 60 boats between two downtown bridges. As we motored around looking for a docking space for our little boat, a local guy told us we could tie up alongside his pontoon boat for the night as he would be at his home ashore a block away.

Fairport has to be the jewel of the canal system, tree lined streets, historic homes, shops, and waterfront electric and water services, restrooms and showers, pump out station, all for \$6-\$10 a night. When we went to pay the dockmaster he looked over at our boat and just laughed and said, "I can't charge you for that!" and gave us the combination code to the restrooms and shower. He recommended Maddy's Restaurant.

We enjoyed a reasonably priced good meal and also the New York Yankees and Mets



ball games on the TV, something we never get to see in our part of North Carolina. We again slept in the cockpit under the stars, but not until around 11pm after a 75' multi-million dollar yacht arrived from the Buffalo direction. He was just barely able to maneuver into a dock space and was gone early next morning, being delivered, someone told us, to Canada.

We decided the next morning to go up to Pittsford, and soon came to a gate over the canal, one that could be dropped instantly to isolate the next section from this end. We entered a short two mile stretch within high dirt embankments, it was a sort of aquaduct that carried the canal across a valley some 70' above it. At the far end was another gate. I learned that they used to have leaks in the embankments and the gates could be shut to close off the aqueduct section for draining so they could fix the leaks.

This area was called Bushnell's Basin and we motored past historic Oliver Loud's Inn and Richardson's Canal House. I wanted to take Julie to lunch here but we were early, so we proceeded on to Pittsford where we tied up across from Schoen Place. We walked around town, yet another beautiful downtown area with a park and bridges over the canal. We enjoyed lunch on the second floor of a restaurant overlooking the canal.

Meeting others enjoying the canal was always interesting. In Pittsford we talked with a guy and his daughter on a 45' sailboat out of Folly Beach, South Carolina, a place we had sailed down to. He told us a tale of being anchored off Sandy Hook in New Jersey one night while on their cruise and awakened in the morning to find themselves surrounded by a fleet of tall ships, vessels 70' to 200' long, shrinking his 45 footer to a "small boat". They were awaiting entry to New York harbor for a parade of sail. And docked behind us was a couple on an 18' cabin boat. They were on their way to Naples, Florida.

While I was in the library looking up some local history, Julie came in to tell me someone wanted to inspect all the boats. I thought, this is crazy, I could just imagine our small boat being impounded 900 miles from home, by some guy with a lot of keys and an attache case, because one of my cotter pins

wasn't stainless steel. I avoided him until he left, and afterwards one guy in a 25' boat told me that the guy had a million page questionnaire to fill out. I didn't see that cruising on this protected canal required any sort of inspection, it's hardly equivalent to going "across the pond"!

Walking around Pittsford next morning we noticed that kayaks could be rented and also there was a rowing club practicing, 8-10 girls racing back and forth. Pittsford was smaller than Fairport but equally as nice with great boating accommodations.

Back at the Perington Boat Launch we met a new friend. He had been called by this complete stranger (me) because we shared a mutual trailer-sailor connection, and was asked (by me, after I had first asked him many questions about the canal area) to pick us up and drive us back to our car and trailer at Seneca Lake. I won't give his name here because he would get calls to do this for every trailer sailor who reads this who ends up on the canal system. He is responsible for saving me having to hitchhike along the New York Thruway, a real friend by any definition. He also had printed out maps showing our best routes home to North Carolina from Pittsford.

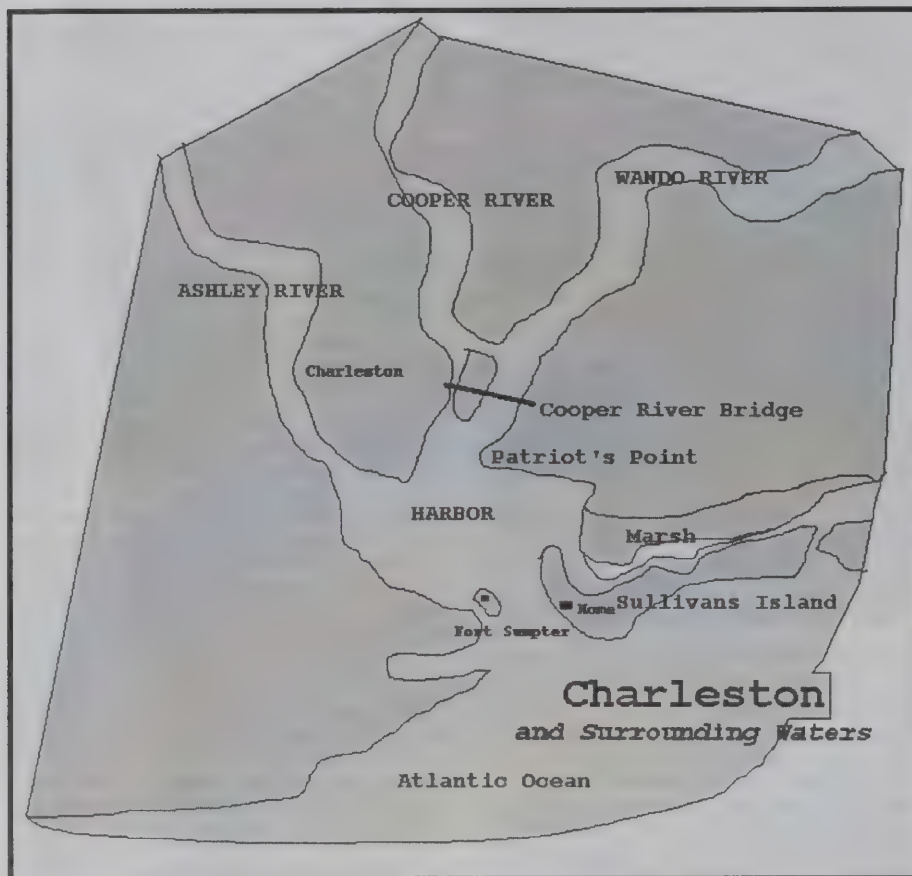
We bid goodbye to many of our friends from the cruise who had taken an interest in us and photographed our little craft, no doubt to have to later explain to friends that we had cruised on that? To where? For how long? While Julie stayed at the ramp, my new friend drove me back to Seneca Lake where I picked up our car and trailer. On my return we hauled out the boat and headed back home.

On our way up to New York we had driven by the state prison at Auburn, New York, at night and on our way back I wanted Julie to photograph me outside the main gate. If you had occasion to receive a Christmas card from us you would understand. But we got lost and that's when the two cop cruisers pulled us over and ordered me to stay in the car. I figured, oh great, some cop got a ticket driving through North Carolina and now was going to get even. But, it turned one of them was a boat nut, and he told me a trailer light was out. Getting out of the car now, I went back to look and when I gave it a kick it came on, so we were okay with him.

And then we headed home. It was another great trip, historically interesting, great weather, all the wonderful lockkeepers, all the help we got from Mid-Lakes Navigation (800) 545-4318) which encouraged me to think we could do this trip in our little boat.

## Canal Cruising Guide

The fantastic New York State Cruising Guide (828) 860-2886 cost about \$30 but was invaluable. About 80 pages size 11" x 15" with full size color charts, lock locations with phone numbers, photos of locks as they appear when approaching them, all pertinent tourist details including marinas, town and city information, parks, camping, sources of supplies, restaurants, historical attractions and local area history, with many photos of what's in store for the canal cruiser. The Guide covers the Champlain, Erie, Oswego, Cayuga and Seneca Canals.



## Kayaking Charleston Harbor

By Hugh J. Hagan III

My wife and I moved to Sullivan's Island, South Carolina, in early 1982. I was continuing my surgical training in orthopaedics at the Medical University Hospital in Charleston, and Sullivan's Island is a peaceful beach community convenient to Charleston.

Our home was in an old house that we rented on the former Fort Moultrie military base. We were told that the house had formerly housed military personnel. There were several similar houses situated close together, and we became close friends with some of the families living in these homes. These houses generally had large backyards backing up on Charleston Harbor, and we had a nice view of

Fort Sumter out of our back door. At night you could hear the rumble of ships as they passed between the sea jetties and entered Charleston Harbor.

I bought an old Sunfish from a fellow up the beach and enjoyed sailing in the harbor. There was little I enjoyed more than skipping over the waves on a breezy day aboard my little sailboat. One of my neighbors noticed my interest in small boats and recognized a potential source of ready cash. He offered to sell me an old boat he had in his attic and seldom used. The boat turned out to be a Klepper Aeriis 2 that he had purchased in 1972. It came with a rudder and two paddles and folded up

into three bags. The boat is beautifully made with the structural elements constructed from ash with aluminum fittings and the hull made of Hypalon rubber with a canvas deck. The frame of the kayak is assembled in two sections to form stern and bow halves, which are then inserted into either end of the hull and attached under tension to stretch the hull longitudinally.

The hull contains inflatable sponsons that run the length of the boat on either side just below the deck. These are inflated by mouth, tensioning the hull transversely on its frame and making the boat nice and snug. I never did get a sail rig for my boat, although a current friend of mine has a Klepper Aeriis 2 with Batwing sail rig and inflatable outriggers and it goes like lightning, especially off the wind. A boat like this was too much for me to resist. I gave my neighbor \$500 for the boat and gear, which was far more than I could afford at the time but which has proven to be a good deal, particularly considering the fact that these boats now cost several thousand dollars new.

At that time, in the early 1980s, sea kayaks were uncommon in the Charleston area. Folbot had been making boats in North Charleston for years, but they were seldom seen out at the beach or in the harbor. Consequently, my boat and I were an oddity. I recall paddling back in the marsh behind Sullivan's Island. I was crabbing with a string, chicken necks, and hand net. It was easy to slide down the little channels rimmed by mud and marsh grass searching for crabs or shrimp. As I paddled back out into the channel on my way home, three guys came up in a nice McKee craft. They approached slowly and wordlessly, staring at the Klepper. Finally, one set his beer down, raised his right hand in the universal sign of greeting and said, "How."

Like I said, I was an oddity.

I paddled my Klepper from a seat I constructed amidships. This could be removed and the boat easily converted back into a two-seater when my wife or a friend wanted to go paddling. I sewed a spray cover for use in the rain. I marveled at the boat's seaworthiness. It would slither over the ocean or harbor swell.

It seemed to absorb rather than fight with the force of the waves. It was also fun to use in the quiet waters between Sullivan's Island and the mainland. You had to watch out for oyster shells, though. I always carried a roll of duct tape just in case!

My oldest son became my crew when he was about 2 years old. We would start out at the government pier behind the Fort Moultrie visitor's center and head up the Intracoastal Waterway, passing under the old Ben Sawyer Bridge. We would land on small islands made of dredge spoil and explore. On the way home my son would sleep under the front deck of the kayak.



One of the things that I liked the best about the Klepper was its portability. It is very easy to assemble. I used to put it together and take it apart just to see how fast I could do it. No matter where we went, if there was going to be semi navigable water nearby, the bags would go into the car. In this manner, we explored all around Charleston, the Edisto River, and rivers closer to our parents' homes in western Virginia.

The rivers surrounding the Charleston peninsula provide some very interesting conditions for a lone kayaker. These rivers, the Ashley, the Cooper, and the Wando, are large, powerful bodies of water full of all sorts of marine life, including porpoises, sea turtles (our friends), and some record tiger sharks (not necessarily our friends). I had the opportunity to see all of these creatures at one time or another from the beach or the Klepper.

On one occasion, one of my friends and I decided we would start way up the Wando and paddle back to Sullivans on the ebbing tide. My wife dropped us off on a crisp fall morning not far from the Wando container port. I recall her questioning our sanity, but it was a "guy thing." There was lots of current and this supplemented our paddling greatly. The river appears to "neck down" a bit as it approaches the old and impressive Cooper River bridges. More current and speed were evident the further downriver we went. Next came Patriot's Point. Then as now, this is a display area for several ships including the WWII carrier *Yorktown*. At the time of our paddle, the nuclear merchant ship *Savannah* was also on display. As we swept down the river towards Patriot's Point and its vessels, the current picked up.

We had an exciting ride along the port side of the *Yorktown*. The huge, gray hull of the carrier rushed by. We were only feet from the ship. It became quickly evident that some brisk paddling was going to be needed to clear the stern of the *Savannah*, which was moored astern the *Yorktown* at a 90° angle. There were people watching from the decks of the *Yorktown* and the *Savannah*. We cleared the rudder of the *Savannah* by about a foot. I still recall the turbulent water created by the current as it swept around the rudder and propeller of the ship. We fired around the headland in the Klepper like we had been shot off a catapult. On that day I gained a greater respect for the power of those tidal currents.

Far from being deterred, I started studying the currents more carefully and planning my adventures accordingly. By waiting for the appropriate turn of the tide, I could paddle off the beach on Sullivans Island, shoot across the channel to Fort Sumter, walk around, and then paddle back with the assistance of the current.

One of my favorite trips would be the early weekend morning paddle into Charleston. I would pack a breakfast, set off from the beach on Sullivans Island, and latch on to the flooding tide. The trip across the harbor was always accompanied by a beautiful sunrise, cavorting porpoises close enough to pat on the back, a tasty breakfast, and the occasional ship on its way in or out of the busy harbor. Then followed a commando-style landing on the ramp of the Carolina Yacht Club (I was not a member). There I would attach my handy wheels to the Klepper and walk, with boat in tow, over to our friend's house on Tradd Street a couple of blocks away. Interestingly, this generated little attention. Charlestonians are

comfortable with most things nautical and small boats being pulled down the street fit that description. From my friend's home, it was on to the hospital for rounds, enriched by a good start on the day.

Being down close to the water provided many opportunities for spotting various bits of useful flotsam. Milk crates were fairly frequently rescued for home storage. A large variety of hats, from regulation Navy to those espousing the virtues of a particular chewing tobacco, were commonly pulled from the drink. My wife would shake her head, condemning my pack rat habits, but she sometimes wore the hats, too.



We moved from Sullivans Island in 1986 and, though we have been back to visit on occasion, we have pretty well lost our connection with the community. People have moved and we don't even know who is now living in our old house.

We recently returned for a short vacation with some old friends and stayed up on the Isle of Palms, taking several trips to visit our old haunts. One morning we went kayaking and it all came back. The porpoises came right up to the boat. The breeze and current created forces sometimes opposed, sometimes synergistic. The pull on the paddle was familiar. The main difference was that now there are other people paddling. It seems that the sport has reached a new level of respectability around Charleston. Outfitters routinely run groups of novices on marsh paddling expeditions. I view this as a good thing although something may have been lost. Nobody came up to say "How."

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*Clytie* emerges from my father's house, where she was completed.

*Clytie's* design and construction plans, particularly the construction plans, changed considerably before she was built, partly because the concept of her structure matured, and partly because my own situation altered so often. I was in the Army, so the choice of opportunities to build her was very limited. When I was in Valcartier I had a spot chosen. But it took me so long to convince my wife that she really wouldn't mind having a boat in her living room, especially a boat in pieces, that time ran out and I was posted again!

This time it was to Debert in 1957 and, so far as quarters were concerned, we were on our own. Luckily I had an uncle familiar with the area, so we were soon housed in a four-room house. Mind you, the situation from a boat building point of view was still pretty grim. The rooms were small, the basement, 26' square, was large enough to build a 22-footer, but there was the eternal problem of how to get it out. The only exit was a stairway zigzagging around one corner of the basement, making it an impossible place to get anything bigger than a 8' 2x4 out.

A full length shot.



## *Clytie*

By Bill Gamblin

So, the list of features I required was: 1) portability, without this she wouldn't fit our peripatetic lifestyle; 2) sleep four, to deal with my two sons, my wife, and me; 3) be cheap, in the mid 50s, with sons away at school, this was essential; 4) be buildable in the space available; and 5) she had to be pretty.

Now, none of these requirements was daunting except the fourth one. I had been sailing since 1934, had assisted in building boats of approximately the size of *Clytie* in 1936-39 and, thanks to the Army, had spent two years studying and four years practicing engineering. Consequently, the mechanical problems that *Clytie* presented were solved in an original and unique way.

After a few days on the drawing board, the main specifications were:

Length - 22'

Beam - 5'6"  
Sail area - 175 ft<sup>2</sup>  
Minimum draft - 6"  
Bare hull weight - 300 lbs.  
Centreboard ballasted with 25 lbs. of lead  
Rudder inboard and removable

### Materials:

Skin - Cold molded, four layers of 0.050 birch veneer  
Deck - 6mm lauan plywood  
Centerboard and rudder boxes - 1/4" Douglas fir plywood with spruce glue strips and stiffeners  
Deck beams - 1/4" Douglas fir plywood with spruce top and bottom strips  
Main beam - a rectangular structure, 1/4" Douglas fir plywood sides with spruce top and bottom strips.  
Buoyancy tanks - 1/4" Douglas fir plywood with spruce glue strips  
Sheer clamp - spruce  
Stem - spruce  
Keel - spruce  
Floor - 1/4" Douglas fir plywood  
Floor stiffeners - 2x1/2 spruce  
Centerboard - maple, FG covered (I found enough maple for the CB and rudder)  
Rudder - maple, FG covered with a stain less steel tube post  
Coamings and transom - 1/2" Honduras mahogany  
Glue - I used about 9 wood screws and 60 brass brads to strengthen and hold the bits while the acid-hardened Ciba Aero lite did its stuff

If you wonder about the choice of materials, please see #3 above. I know that Caes Brunzeel makes marvelous plywood, and lots of people sell woods with long lives that might make Douglas fir and spruce look like a poor choice. Except that 26 years later we broke her up and, strange to say, the only soft spot in the hull was about two square feet in the skin which had inadvertently been exposed to the weather for some time.

The lofting and setting up of the molds and the battens were normal. The backbone, however, was different. The keel and stem were of spruce, made in two halves, doweled together (unglued at this stage), and held together by glue blocks. Deck beams were of 1/4" ply with 3/4" spruce triangular glue strips at the top, and a 3/4 by 5/8" spruce strip rabbeted for the bottom. The main beam was 1/4" ply on the sides and 3/4" spruce for the top and bottom. Boxes for the rudder and centerboard were 1/4" ply with 3/4" spruce for ledges and glue blocks. The buoyancy tanks were of 1/4" ply with 3/4" spruce glue blocks.

One pair of tanks was built onto the after end of the centerboard box, another smaller pair halfway to the after end of the cockpit. The floor was a horizontal piece of 1/4" ply, which was scarfed and glued to the inside of the skin and the keel. Coamings were of 1/2 x 6" Honduras mahogany, and transom 1/2" Honduras mahogany over 1/4" ply, rail 1-1/4" Honduras mahogany. I had to use some nicely finished wood where it showed. The nearest thing to knees were 8" 1/4" ply triangles at each end of the deck beams, and 10" 1/4" ply triangles on the main beam ends, all the triangular pieces of ply were secured with spruce glue strips.

That gives the bare bones of the construction, now for some details. She was cold molded out of four layers of 0.050" birch ve-

neer. I had used birch before, but only in a thickness of 3/4" and up and it was, aside from a tendency to rot, good for working. The veneer is different in that it wrinkles. It makes a fine hull when you're done, but the staples that are necessary to tame its wrinkles add up to quite a few (100,000 in our case). Why use it? Remember that *Clytie* had to be cheap, and birch veneer was only a nickel per square foot. The floor, tapering from about 2' wide amidships, is very strong when it is taken in conjunction with the keel, skin, and stiffeners. The rudder was built on a piece of heavy wall stainless steel tube, by bolting maple to it.

After considerable work with a drawknife and spoke shave, a coating of fiberglass was followed by several coats of paint and wet-and-dry. The deck beams were the same as floor beams in a house today, a ply vertical with solid wood top and bottom. The buoyancy tanks also act as partial bulkheads in the way of the cockpit and complement the forward ledge in the centerboard box which is extended to tie into the main beam. The rudder box also runs from the keel to the deck, where it is glued to two deck beams. The buoyancy tanks, the main beam centerboard box structure, and the rudder box all contribute to the strength and stiffness of the structure. She was extremely stiff, the skin was thin, but curved or stiffened where it was necessary. The centerboard was an item that needed a second try. The first was a maple board with a nice finish that lasted until we went on the wind, when it gave up. Back to the drawing board, we again used a maple board but with fiberglass covering and a 25 lb. lead tip. That solved the only mechanical problem we had with the boat.

The third requirement, cheapness, was well-shown in the rig. For example, the chain plates are unusual, they consist of a pair of 4x4" blocks of hardwood, glued and screwed to the topsides under the sheer clamp, with a 3/32" x 1" groove in the side next to the skin. A 1/16" stainless steel strap with a hole drilled in each end, is bent into a "U" shape with about 3/4" between the legs. These are long enough to extend a couple of inches above the deck when they are fed round the hardwood block and through slots cut in the deck. Then, with a clevis pin to attach to the shrouds and a shallow wedge to tighten the loop, it forms a very quick and cheap alternative to turnbuckles. Shrouds were made up of 0.1" diameter stainless steel wire with eyes formed and wrapped with copper wire, then silver soldered.

The gooseneck was made of a couple of pieces of cotton-reinforced phenolic resin, with the piece that entered the boom having a short square section and a longer round section. When rolling in a reef, it was necessary to pull the boom back an inch to release the square section, roll in the amount of reef desired, and slide the boom forward onto the square section to lock it (built with a hand saw, a couple of files, and a lot of sweat). I had a few bits of Micarta (cotton-reinforced phenolic resin), so I turned out the rudder head fitting from them. The tiller was a nice piece of apple wood, made of a cutting from a former orchard. British prices were low, so we got the aluminum mast and sails from Proctor & Ratsey & Laphorn. The sails were turkey red and the topsides were dark blue, a very pretty combination. Besides, they are our regimental colors.

I wish I had taken all the bets that she

would never see the open air. She was 22' long encased in a 26' cement basement with stairs that zigzagged up one corner. When the cold molding was done and the molding trimmed to the sheer line, the glue blocks were knocked off and the two sides separated. With the removal of the two steps that led up to the kitchen, the sides were turned through 90° and one at a time fed through the gap and out the back door with only a few inches of clearance. Don't forget that a hull is very flexible without its deck, so you can imagine the flexibility of a half hull.

Once the two half hulls were outside, they were doweled and glued together and ready to be moved to my father's house in Cambridge, near Camp Gagetown. Luckily enough that was my next posting. Every weekend and holiday that winter *Clytie* took shape, and by August she was ready for launching. My wife was given a bouquet of phlox and peonies and a bottle of parsnip wine arrayed in a jacket for the ceremony. *Clytie* was the name of a nymph in mythology who fell in love with Apollo, the Sun God. She watched the sun every day and finally became rooted to the spot as a sunflower which follows the sun.

Our plans for cruising that year included a two-week holiday on the Washademoak Lake and Saint John River system. We took everything that we thought we would need, which for four people and two dogs was a lot. Our first stop was MacDonald's Point. Here Roger found out how a light boat behaves. He went to step from the foredeck to the wharf, the boat moved and Roger didn't, except straight down.

One of our dogs, Pepe, got in on the fishing here. He grabbed one of the lures, which was baited with a piece of frankfurter, and swallowed it. He had cut the line so we had to feed him the entire supply of hamburger and hope that it worked, and it did. The two weeks went by quickly, and we were at Evandale, one day from home when our grub and money ran out. In a search for money we looked through all our clothes, and my wife gave a shout as she came up with a dollar, folded into a space the size of a quarter. We all went up to the snack bar and each of us had a hotdog and a Coke. Cokes for 10 cents and hotdogs for 15 cents and no tax. This was not yesterday.

One year in New Brunswick and we were off to Ottawa. There *Clytie* got a chance to show her speed as a racer. Starting with the cruising fleet, 10 minutes after the International Dragons, we regularly finished in the middle of the Dragon fleet but, no matter how hard we tried, we couldn't beat all of them. After all 10 minutes is hard to make up on a four-mile course. *Clytie* finally ended up with the highest handicap in the fleet. One feature that she displayed was her ability to slide very smoothly from sailing to planing. Other boats seem to have a separate speed range when they plane, *Clytie* didn't. She would sail at any speed, you had to look astern to see if she was planing.

She was the only boat I had that planed since 1937, when a *Rudder*-designed Lark class scow got on a plane off the wind in half a gale and had me shouting and singing at this wonderful sensation. Unfortunately, she was so heavily built that she only planed once.

One race that didn't turn out well was the Constance Bay Race. It started in about 18 knots of wind, and we had to roll the main down about five rolls before we were halfway there, in spite of having all three of us on the



Despite the length/beam ratio and hull weight, 308 lbs. (measured), she doesn't display any lack of stiffness.



Boom tent partly fitted.

rail. Three boats were in the lead, the *Hope*, the *Negark*, and *Clytie*. *Hope* was a 30' gaff sloop and *Negark* was a 35' Bermuda yawl. When we were a mile from the finish line we were all struck by a wind shift. Not the usual one, where you have time to react, but a "now it's SW, now it's NW" kind. *Hope* capsized and *Negark* split her new jib and went a mile down river out of control before they could take charge. We capsized. Our mast was about 8' taller than the depth of water, and when we went over the masthead hit bottom. The wind blowing on the bottom of the hull drove the mast into the mud. By the time we had disconnected the shrouds, the mast was kinked. For the rest of the day we were kept busy getting her hauled out, trimming off the mast, and fitting it so we could sail home the next day under jib. The following week we welded up the mast and were sailing again.

Three years in Ottawa and we were off to London, where I spent the next three years in the best job in the Canadian Army, and the best salt water sailing anywhere. Three more years in Manitoba, with no sailing, then back to Ottawa, where we launched her again in Mississippi Lake. We sailed her for several years and then laid her up for several years while I rebuilt the kitchen in the old house we lived in. We thought she was well-covered, she was where we could see her, but one quarter was inaccessible and, unknown to us, had the cover torn. We discovered it when we were going to put her away again, while we took off south in a 41-footer. So we broke her up and found that the only spot in the whole hull that was soft was the one that had been exposed. The rest, despite 26 years of use and misuse, was perfectly sound.



Under sail.

## Lessons that she taught me

1. She satisfied all the requirements: she was portable; slept four, one each side of the centerboard box and two astern of the box (and two dachshunds on sail bags up forward); she was cheap to build, both in the choice of materials and in their utilization; she was designed to be built in the space at hand; its drawbacks were catered for in the design; she might be pretty, that depends on your taste, I'm not sold on the reverse sheer, but I like her.
2. The hull design is now badly out of date, she balanced well except she griped when she put her rail down.
3. If you are going to use birch veneer as I did, don't!
4. The hull and rig stood up well to 26 years of intermittent use and abuse.
5. She was a very nice boat, to build, to handle, and to look at.
6. If I were to build to the same requirements today, I would make some changes in the lines. But she would be the same constructionally, except for the birch!



First century A.D. mosaic of a fishing boat decorates a house a mile from the discovery site.

I am a sailor, and so I have always been intrigued by the boats on which Jesus sailed. He is often depicted in the Bible crossing the Sea of Galilee, to find a place to rest with His disciples, to escape the crowds, or to reach another lakeside city. Jesus was at home in boats and used seamen's terms in His teaching, as when He rebuked the Pharisees and Sadducees for not reading the signs of the times, quoting, "Red sky at night, sailor's delight, red sky in the morning, sailors take warning" (Matthew 16:2-3, paraphrased).

I wondered what His boat was like. I felt sure it would not have been the clumsy-looking craft portrayed in paintings by the old masters, swollen vessels with telephone pole-like masts and rags of sails whipping in the wind.

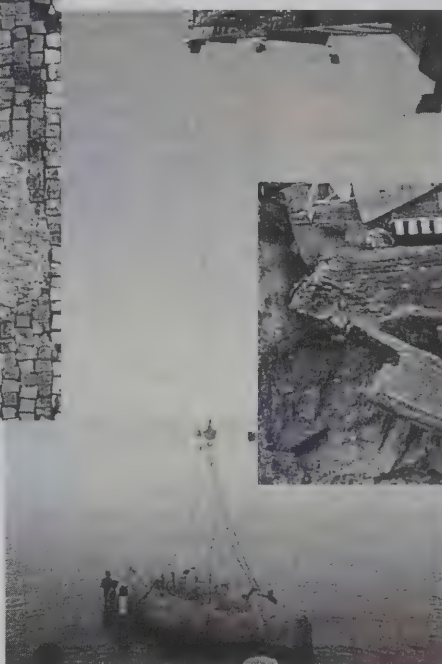
I also wondered about Mark's report of that terrible storm on the Sea of Galilee, when the fear-stricken disciples woke Jesus, who was in the stern "asleep on a pillow" (Mark 4:38).

I understood the sleeping. Sailors who have crossed the Atlantic alone in small sailboats have told me that when rough weather strikes, the only thing to do is batten down the hatches and crawl into the cabin to sleep. But Jesus asleep on a pillow? On a working fishing boat? That was hard for me to imagine.

Then I read a fascinating article in *Biblical Archaeology Review* (September/October 1988) about an unusual 1986 find in the Sea of Galilee. A fishing boat had been discovered, fairly well-preserved, buried in the mud on the northeastern shore of the Sea of Galilee. With radiocarbon dating, archaeologists were able to determine that the boat had been used in Jesus' era. They carefully raised the hull and transported it to the nearby Yigal Allon Museum, where it is still undergoing restoration.

## A Boat for Fishers of Men

By Richard H. Schneider  
Guideposts Senior Staff  
Editor



Fragile hull, protected by buoyant polyurethane cocoon, on its last voyage to museum.



Pegged mortise-and-tenon joint used in Jesus' time. Rule is archaeologist's scale.

Historical records show that the boat is typical of those used in Jesus' time. About 26' long and 7-1/2' wide, with a rounded stem and graceful bow, it is an open vessel constructed of cedar planking on a sturdy oak frame.

It was powered by oars or one sail and had a large stern platform on which the helmsman stood with a steering oar. From this deck, fishermen cast nets up to 1,500' long. Jesus equated heaven to such a net in Matthew 13:47,48, "The kingdom of heaven is like a net which was thrown into the sea and gathered fish of every kind; when it was full, men drew it ashore and sat down and sorted the good into vessels but threw away the bad" (*Revised Standard Version*).

I was surprised when I read that there was a pillow in the boat, just like the one Jesus would have slept on. Actually it was a ballast sack weighing about 55 pounds, called a balance pillow. According to the magazine article, "[such] sandbags were used to trim the boat when under sail, when not in use they were stored beneath the stern deck where they could be used as pillows by crews resting there."

More and more I learn that the Bible is true not only in spirit but in physical description as well. The Gospel writers were good reporters.



The first thing I noticed was that J.J. (my son) was taking an inordinate interest in my collection of boat books. He asked if he could borrow this one or that one, and would devour each like a Roman at a feast ... after each course ... hungry for more! Then came the questions. Questions on design, types of rig, and why is the centerboard where it is? He was retaining more of the knowledge in the books than I recall reading. Finally I realized that the poor kid was hooked, hooked on boats. He has his own subscriptions to *WoodenBoat* and *Messing About in Boats* now because I couldn't give him mine fast enough!

Eventually I asked my son the age-old question, "So, you think that you might want a small sailing skiff?"

His reply was, "Wow, that would be great! Can we design and build it ourselves?"

"Sure, no problem," I replied. Right!

Well, I designed the boat, discussing each detail with him, so it was definitely a joint effort. The primary requirement was that the boat had to fit into the back of a pickup truck, so this determined its length of 10', although it now has its own trailer. Boats under 12' are sometimes made too narrow for my tastes, and being a cat boat type person, at this point in my life anyway, I decided to make her as wide as my lightest drawing board batten would allow. This made her 4'4" at the widest point of the gunnels.

Thirty-three inches was determined for the bottom width, which gave her more than ample flare, another quality which I desire in small craft. She was also given as much sheer as was reasonable, 4" of rocker in her bottom for her to sail and row well, and a very raked transom, as no engine was to be used, also quite wide, 42" at the top, 28" at the bottom, and 23" high. We gave her a cat rig with a sprit sail of 52 ft<sup>2</sup>. She purposely has no boom, I didn't want J.J. to get bopped on the head (why do you think they call them booms)?

Originally I was going to make her carvel-planked with a cross-planked bottom. I had even set up to build her like this when my son returned from Mystic Seaport's day camp saying that he really wanted to build it lapstrake. He had seen the Chaisson dory skiff that the Small Boat Shop had built and loved it. Well, I had to change a few things, like everything, but we ended up planking her bottom fore and aft like a dory, (cross planking would have been stronger) and building her

## Puffin A Small Dory-Skiff

By Ron Denman

upside down and lapstrake. Talk about a turn-around!

The type of construction material was determined by what I had left over after planking my 28' catboat, white cedar for the planks and white oak left over from steaming frames. The skiff's bottom was made of three wide planks of a full 1" cedar with caulking bevels, cleated with 1"x2" oak cleats and bent over the molds I had erected to get the 4" of rocker dory style, except it was upside down. I don't know what it is, but I really like to build boats upside down. It always seems so much easier to me.

Pine is the usual choice for a bottom built like this, as it is a bit stronger, but as I mentioned we were using leftovers and cedar is lighter, more rot resistant, and I like the smell of it. Although weight was not a prime consideration, we did try to keep it fairly light as we would have to load it into the truck. Next the stem was cut out of oak and fastened to the bottom with a white oak knee, which also passes as the mast step. Then the transom was built up of three pieces of 3/4" Honduras mahogany glued and doweled together with 3/8" oak dowels. Time will tell how well this holds up.

The next thing to be done was to build the four sets of frames. These were built of 3/4" x 2" white oak tapered to 3/4" x 3/4" at the sheer and gusseted with 3/8" marine plywood glued and screwed with epoxy at chine with limber holes cut out of the comers. These were all made up in units first, then attached to the bottom and screwed in from the outside into the frames to secure them.

Once all that was done, it was time to do the planking. This has always been my favorite part of boat building, there is just something magical about it. It always amazes me that the planks actually fit on. Our planking was to be 3/8" cedar with beveled laps screwed to the frames and the laps copper riveted. First we "lined" out the planks on the frames with thin battens to make sure that they would look OK. Our stock was wide enough to have only

three planks to a side.

The garboard on this boat is actually the easiest plank to fit as there is only the top bevel (or bottom, as it is upside down) to cut. A caulking bevel is made with the bottom plank as with the transom and stem. Then screws in the other planks are only placed on the bottom through both planks into the frame. The other two planks, the broad and the sheer, are a little more work but can come out true with a little time as the bevels are fairly easy to take off on this boat. It actually is easier than I have described it.

The center board trunk is a bit unusual on *Puffin*, J.J.'s choice of name. Usually a thwart will run across the trunk at some point and tie into the sides for strength. We decided that we needed a little more room, so we put a round seat, almost tractor-like, 15" in diameter and 1" thick, on the aft side of the trunk. This seemed about right for weight distribution, but if this boat were for an adult it would probably be better to put the seat further forward to give a little more leg room when rowing.

A "V" shaped thwart was put in the bow for an added rowing station when more people are aboard, and also for a mast partner, a secondary support for the mast. The rear thwart or stern sheets were made of 1" mahogany in the traditional "U" fashion, as we both like it this way, but all the mahogany adds a great deal of weight, for us the useful design outweighed this drawback.

I realize the trend nowadays is toward light and ultralight small craft, but I like them a little heavy myself. They take little more abuse and the weight adds in sail carrying capabilities. Ultralight craft are great, but a little too tender, I think, for young ones to horse around in. Kids tend to drag all kinds of stuff up from the deep to dump into the bilge and take home, not to mention using the boat for a swim platform and whatever else they invent. This skiff weighs, in bare hull and before mahogany trim, 68lbs. She has 25-30lbs. of mahogany on her end, with the center board ballast, she comes in at 100 lbs. or thereabouts. Strong and sturdy and not as heavy as my first boat.

I vividly recall that bright hot summer day, years ago, when my friend David and I decided that the horse watering trough could be used as a boat. We were all of 11 years old then and the trough was a cast iron bathtub, 5'

long and heaven knows how much it weighed! The pond was about a 1/4-mile away, thankfully downhill, and we pushed and pulled and rolled it on logs and planks and whatever else was available. After many scrapes and bruises we finally arrived at the water's edge. We used pieces of plastic tarp, masonite and, of course, bathtub caulk, to fill in the drain hole and the holes for the faucets.

The vessel being ready, it was decided, after much deliberation, that as I was a bit lighter (by a pound or two) and, as it was my idea, I should be the one to take our fine craft on her maiden voyage. Armed with a plank for a paddle, we slid the tub through the mud, out into the water. Being a rather heavily displaced craft, we had to venture out up to our waists before it was out of the mud, but it floated! We couldn't believe it, she had a whole inch of freeboard! It is a tough feat to climb into such a low craft when one is in the water next to it, without upsetting it, but with a little help from Dave, I managed to board her without shipping too much water.

Once in command of my new vessel, with perhaps 3/4" now of freeboard, I was determined to cross the 20-acre pond for the trial run. It was slow going, but I made it exactly to the middle when a head wind came up, producing 1-1/2" waves. These mountainous seas broke over my bow and sank me in less than a minute. So ended the voyage, and my first boat, as salvage of the iron beast from the deep

pond mud was obviously impossible. I have never heard anyone laugh so hard as Dave did as I swam to shore, so, as you can see, young boys and girls, I guess, need rugged craft.

*Puffin's* spars were made of clear cedar as spruce was unavailable to me at the time and I had the cedar. The mast was 10' long, which made it easy. Although Sika spruce would have been the wood of choice, for its lightness and strength, cedar is also very light and strong enough, it seems, for small spars like these, so far anyway, and cheaper too, but not by much!

I used the usual method of shaping spars, the age old method of drawing out the taper on the spar, then eight side it, then sixteen side it, with an electric hand plane. I think you get the idea. The spars were so light that for final sanding, I put a #14 wood screw in one end and checked it in a 1/2" hand drill, clamped the whole affair to some sawhorses with V blocks made of oak holding the spar, and spun it like a lathe, using different grades of sandpaper until it was super fair and smooth. This is really unnecessary, I just wanted to see if it would work.

The smile, the grin from ear to ear on J.J.'s face, was all the reward I needed, if I needed any, and I don't, for building this boat. It was a great feeling when we hoisted the sail for the first time with J.J. at the tiller, as the boat heeled lightly to the wind and glided gently across the water.

The boat handles well, very well, much better than I expected. She has a very slight weather helm in even the strongest gust which, if the tiller was let go, she would pull up into the wind. She sails into the wind extremely well, which surprised me greatly since her rig is very easy to handle. J.J. rigs the whole boat himself, including stepping the mast, etc.

The rudder is rigged with a cotter pin on a string, which in turn is tied to the gudgeon. When coming into shore, we just pull the pin and up comes the rudder. We did consider a pivoting rudder, but the pin seemed a simpler alternative and does work well for us. He now has a pivoting rudder. We preferred a centerboard to daggerboard for ease of operation. It also avoided having to deal with the occasional squirt of water in your face that always seems to accompany a daggerboard trunk arrangement.

Things I'd change - I would probably consider cross-planking the bottom, skiff fashion, in the future as this is a fairly wide bottom for the fore and aft dory style of construction. I'd move the rowing seat forward on the centerboard trunk, or maybe make the whole trunk the seat so you would be able to move fore and aft on it to be able to take care of the longer-legged variety. Possibly I would change the rudder over to a pivoting drop rudder (done), although she sails quite well now in about 8" of water. That's it, all in all a fairly nice compromise, for us that is.

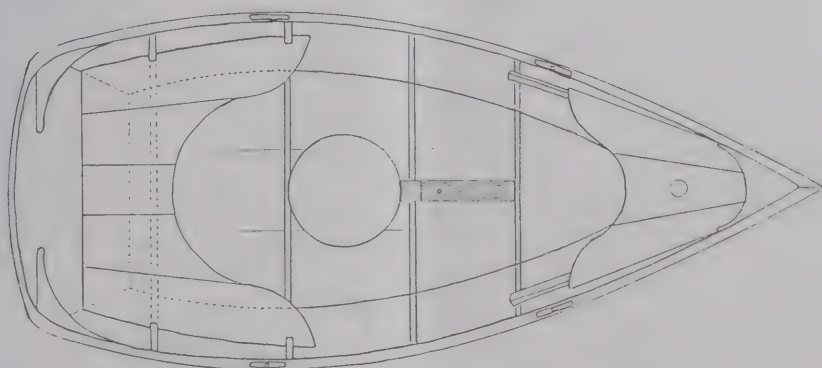
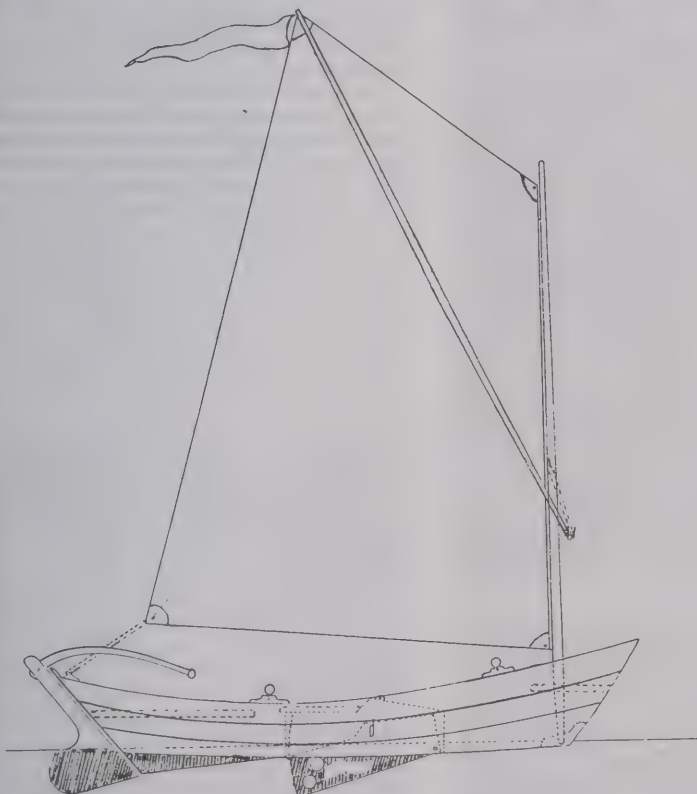




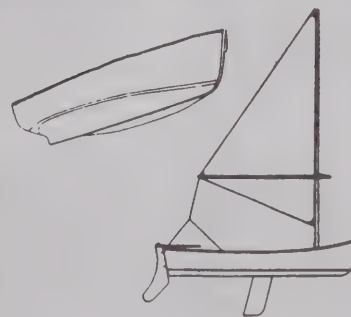
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## Amateur Boatbuilders

By Robb White

I'll tell you first, I think that good wood boats built by amateur boatbuilders are the best thing to happen to this business. A skillful and ardent amateur can afford the time to build a far better boat than most poor old hard-scrabble professionals can. When people who don't have that ability see those fine boats they marvel and wish they had one, too. Who do they turn to? You guessed it - me. I believe that professionals who help amateurs are helping themselves, and I do it all the time. For one thing, it generates stories.

The first one to come to mind happened quite recently. A man called me about a dory project, wanted to know where he could get some real good plywood for the bottom. I told him that the term "real good plywood" was an oxymoron and only a regular moron would waste his time looking for it. He was taken aback by that and told me that he didn't want to use real wood lumber for the bottom because he intended to keep the boat on a trailer and didn't want it to leak every time he put it in the water.

I sent him instructions for our method of making a vacuum-bagged laminate with thin lumber and epoxy like we use for our extra light pirogues. About a week later, I got another call. He wanted to know if I thought a layer of fiberglass between the plies would add too much weight. I told him that it wouldn't hurt if it did add a little weight because dories worked better with a little load and the extra strength would help the bottom stay straight on the rollers and bunks of a trailer.

About a year later, he called again. He had finished his dory and liked it just fine but he was going to have to move. He wanted to know if I thought the vacuum-bagged, fiberglass reinforced, solid Douglas fir, epoxy glued, laminated bottom would stand the load of some of his household goods. I asked him how many plies of wood and eight plies of 8-oz. cloth and it was an 1-1/8" thick. I told him I thought it would haul his microwave and weed-eater just fine.

Another time, a young man, possibly a hippie, showed up at the shop with the worst-looking canoe I ever saw in my life. The canvas had rotted off 30 years ago and it had sat on the ground until the whole bottom had disintegrated. It was completely out of shape. He was serious about it though, had even sifted the little clenched tacks out of the dirt where the canoe had been and had them in a paper cup and wanted to know how to fix it. I couldn't blame him because it had been a good looking canoe, one of the ones with hand-tapered, beveled edge ash frames and beautiful, thin cedar planking.

I told him that the best way to do it would be to get a bunch of good canoe books first, then take it all apart and make a duplicate of every part and put it back together just like he was building a canoe. I thought I would never hear another word out of that project but I was wrong.

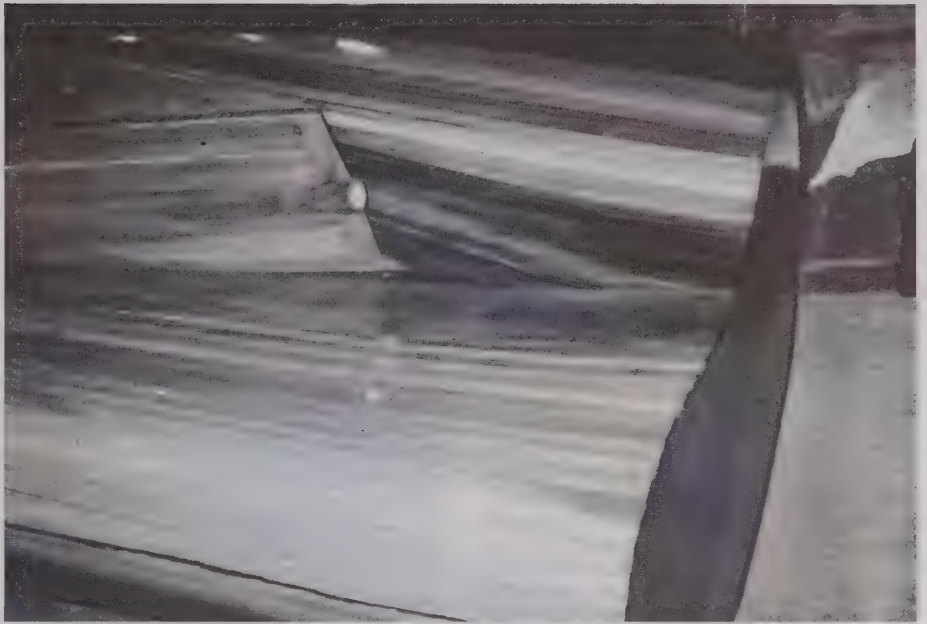
About a year later, he came by and wanted to know if I would make a few little pieces of hardware so he could put his canoe in the water. I had to go see. It brought tears to

my eyes. He had completely re-built that old boat. All the frames were split out and pocket-knife carved and scraped, just like the originals. The veneer thin planking had been hand-thickness planed with scrapers. There wasn't a hammer dent anywhere near any of the thousands of clenched tacks. The canvas job was perfect, rails scraped to the finest taper. I did my best on the hardware, too. It was a jam-up job all around.

I had a kid who wanted to build a strip planked boat. He had read a Weston Farmer article in *Science and Mechanics* and got all hepped up. Obviously, this was a long time ago and pre-worked canoe strips just weren't available like they are now (see what I am trying to tell you about the salvation of this business). He wanted to know where to get the strips made. I was building a few strip planked boats myself back then, but I was hand tapering and beveling the strips instead of using hollow and round and it was kind of tricky.

I advised him to find a cabinet shop and explain to them what he wanted. The Weston Farmer boat that he wanted to build (Dolly Varden, a sport boat and a good one) had a pair of garboard strakes that were tapered such that after they were fitted, the whole rest of the boat could be built with parallel edged hollow and round strips. The boy found the right cabinet shop all right. The strips were old-growth, red-heart cypress with annual rings so close together that trying to count them would cause myopia. I bet that boat is still somebody's pride and joy somewhere right now. I bought 12 leftover strips from him, and every now and then I go up in the attic and fondle them.

So I'll leave you with this advice. If you are going to build a boat, think about how long it will take you. Think about how much it will be worth to you. Think about how it will break your heart when it finally comes to pieces. Might as well build an heirloom.



## About These Amateur Built Boats (Yeah, they're plywood, but...)



### Ugliest Boat in the Show

This is a Bolger Brick I entered in a recent antique and classic boat show on one of our inland lakes. Entered in the Novelty Class as a highly modified classic punt, it created a great deal of interest, and was voted "Ugliest Boat in the Show".

It is to be featured in a future edition of a national gardening magazine as a result of the magazine's staff having spotted it at the show.

Ian Walker, Picton, NZ

### The Pleasure of One's Own Handiwork

This photo illustrates this amateur builder's ultimate pleasure derived from building one's own boat, under sail in my Bolger Brick.

Joe Travis, Kendallville, IN



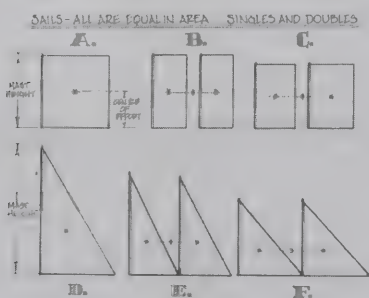
## How Many?

Stephen Ladd's *Squeak* has two sails, a main and a mizzen sail. Each is a leg-o-mutton with sprit boom. This is an easily manageable rig as far as controlling the sails are concerned.

This sail rig, of course, could appear to one person as desirable, however, to another person the idea of having two masts and the extra gear required for two sails would be a bother. That person may prefer a single sail or possibly a sloop rig. This section would like to study some of the aspects of the single and multiple sail rigs.

Mr. Bolger wrote an excellent and, I might add, unique book called *100 Small Boat Rigs*. In that book he describes in detail the pros and cons of each sail rig. This section will not judge the sailing qualities but will look at the functionality of these sail rigs. This section will also look at the overall usefulness of sail rigs on boats the size of *Squeak*.

If you look at the following sketch (area details) you will see representation of single and double sail rigs. The areas are exactly the same but arranged in different combinations.

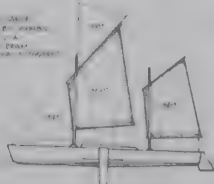


Detail A in that sketch is a single sail. B is the same sail divided in two, now two spars are required (they can be smaller in section). C has reduced the height of the spars, spreading the area lower.

Now look at the bottom of the sketch. Instead of using a square, we use the same area in a triangle. Detail D shows how the mast has to increase in height to maintain the same area. Now D has been divided into two triangles. Note that again the masts can be shorter and lighter in section. Detail F has spread the area lower by increasing the length of the boom. Note that this configuration has the lowest center of effort of all the sail rigs. It also should be noted that by using two spars we divide the load on the hull to separate areas, which in turn places less stress on the hull.

The area details sketch shows that we can lower the mast by increasing the number of sails. Increasing the number of sails requires an additional spar and extra control lines. The sketch also shows that by stretching the sail area out horizontally you can reduce the mast height and center of effort.

Now we look at how different designers arrange their sail rigs on different boats. The following sketch shows a sailing canoe by John Bull.



## Capsize, a Study of an Adventure

By Don Elliott

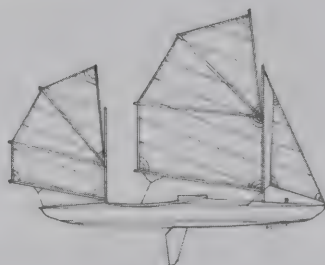
### Introduction

This is Part 13 (and the conclusion) of a series of articles which began in the March 1 issue which will be an interactive study of a small boat adventure, an analysis of events described in Chapter 12 of Stephen Ladd's book *Three Years in a 12' Boat*. Each article will include a question or questions for interested readers to consider answers. Suggested answers will be included in the following articles.

The purpose of this series is to look at the problems facing people who go off adventuring in small boats. Stephen's boat was self-designed and self-built. Was it designed correctly for the conditions it might face? That question is the focus of this study, to look at not only Stephen's boat but also design aspects of all boats used for such adventures.

Safety of the boat and its crew must be the very first thing any small boat designer must consider when he designs a boat.

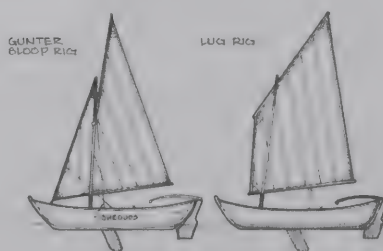
You can see he has broken up the sail area into many sails. This was the common practice in earlier sailing canoes. Despite the complexity of the rig, this was the preferred arrangement on most canoes in that time. Was it simply that way for the quest for speed alone? It appears it wasn't if we look at Yakaboo. Yakaboo's sole purpose was to make successful sea passages.



Is all the complexity of these multiple sails worth it? Yakaboo sails could be adjusted in a variety of combinations to suit the conditions. It should also be noted that a mizzen or any riding sail would hold the bow to the wind while you tend to other things.

The following sketch shows how designer Iain Oughtred handles the single sail rig.

THE USSO BOAT.  
DESIGN BY IAIN OUGHTRED



Notice that even though he uses a sloop rig (gunter) the mast is no taller than a lug rig. Actually it is a bit shorter. Unfortunately, it necessitates the use of shrouds to compensate for the pull of the jib on the spar. Notice the lug rig has enough sail ahead of the mast to aid tacking.

The above section has presented the various details of sail rigs, their combinations, and their arrangements. The next section will see if any of them can be put to practical use on a small beach cruiser. The main point in applying any sail rig is that it will not endanger the crew or the ship in any way.

### Aspect Ratios

In the past two sections we have studied different features of various sail rigs. When we first started this series, it was explained that the main focus of these articles is on the safety aspects of small cruising boats. This also includes sail rigs. Therefore, safety is always more important than performance in these articles. If we can get some performance fine, but not by sacrificing safety.

In the first part of this section we'll look at aspect ratios of different sail arrangements. After that we'll see what the affects of different rigs have on the hull and the control of the boat.

High aspect ratio sail rigs can yield excellent windward performance. Combine that with the right hull or hulls, these high aspect ratio sail rigs will give incredible results, however, not without some sacrifices, as we shall see.

What is considered a high aspect sail rig? A little math will tell if a sail rig can be considered high aspect ratio. How do you figure the aspect ratio of a sail rig? It's easy, you measure the leading edge of the sail (the luff of the main sail), square that, and then divide that by the area of the sail. The sailboats you generally see today mostly have (sloop rigs) aspect ratios in the area of 5 to 7.

These ratios are being increased now, way above those ratios, all for the sake of speed and windward performance. You can, however, overdo a good thing. You may end up constantly fighting to keep the boat upright. The old time description of a boat that sailed this way was labeled a "cranky" boat. At some point you will have to reef, if that's needed too often then you end up with a tall empty spar and rigging above your reefed sail, leaving you with extra and unnecessary weight and windage aloft.

The surprising thing about these high aspect rigs is that in wind tunnel tests it has been shown that after the boom moves to about 35 degrees off the centerline of the boat, an aspect ratio as low as 1 will work as well as a higher aspect ratio, without the added height and weight. Once the sheets are eased a high aspect ratio is less important. You can see the cost of high performance to windward has its disadvantages and high aspect ratios must be used with care. If they are not, they will make the boat a handful to handle and also put a great deal of stress on the hull. For small cruisers it's not a good idea to follow the designs trends of today's sail rigs.

Take a look at how our ancestors dealt with this problem. When you first see a picture or a drawing of an old-time sailing canoe you're struck by the number of sails on such a

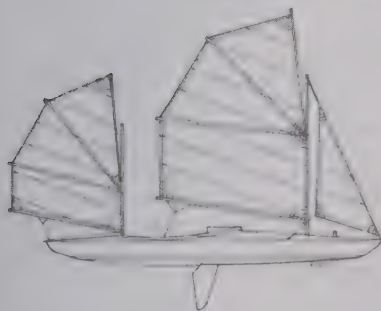
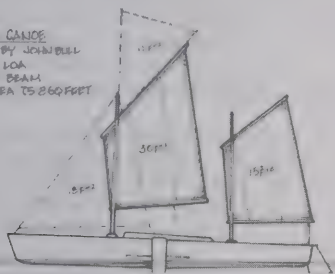
narrow and small hull. Why would they put all those sails, along with all their lines, on such tiny crafts? It appears too complex and overdone. There can only be a few answers to that question. One answer has to be they wanted to keep the aspect ratio low, another would be to maintain control over the boat by removing or adding sails as required. Should we follow their advice?

How can a boat with a lot of sails make the boat easier to handle? If you recall, in the last section we pointed out that the need for immediate reduction of sail area is one of the requirements of a small cruiser. This has to be done while still maintaining control of the vessel.

If you jump up to lower the main you have a mizzen to keep the bows to the wind, so you are in control. Sails bent on long sail tracks or tall spars are difficult to lower and some are prone to jamming, not a good situation.

Below are some sketches that were shown earlier but are repeated for your reference since they relate to this section.

GAILING CANOE  
DESIGN BY JOHN BULL  
16 FOOT LOA  
23 INCH BEAM  
SAIL AREA 15.260 SQ FT



The next section will use all the past information given in the last articles on sail rigs and apply it to the practical operation of a small cruiser.

## Trouble Spots in Sail Rigs

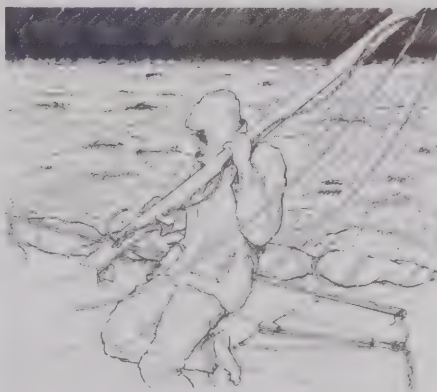
The equipment that is required to drive a sailboat when using a sail or sails consists of basically a sail or sails, a spar or spars, and control lines. It can be designed with or without booms or yards. If the spars or sails become too large or a jib is added, the boat will then require the addition of shrouds or stays to handle the increased loads. The rig can become more complex by adding running back stays or using sail rigs that require a lot of battens such as a junk rig. This is fine for a boat that has ballast but not for a small cruiser. One thing many sailors like is having a boat with an unstayed spar. This arrangement allows the sail to swing freely to any position without being halted by a shroud. In an emergency you simply let the sheet fly.

This section will look at how a sail rig

can be arranged on a small boat in a safe and sane manner. This study is not about day sailing or an outing for the afternoon, here we are looking at a small cruiser that must face service daily and in some cases very hard service, it must be reliable and tough, any failure may end that journey or worse, endanger the crew.

If you recall in the first section on sails we made a small list of possible trouble spots for sail rigs aboard a small sailboat. This list is repeated here for reference.

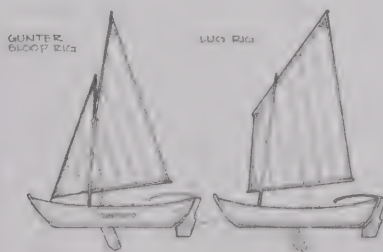
1. The height of the mast or masts.
2. The number of the masts.
3. The danger to the crew from swinging booms.
4. Possible hull damage due to the design of the mast and its locations.
5. The ability of the sail rig to take in a reef with speed and ease, this would include getting the sails down quickly.
6. For extended trips the spars must be able to be removed or lowered at sea if conditions demand it (see the following sketch).



The best approach is to look closely at each item on the list, considering whether it endangers the crew or the boat to a degree that it must be corrected or eliminated.

Item 1: In order to ensure that there will be no problems from the spars they must be kept short. In past sections it was shown that this could be accomplished by having multiple spars or by keeping the aspect ratio low. One single sail rig that will give you a low spar and to boot a fair windward performance is the gunter sail rig. The only problem with that is, it would require the addition of shrouds, but it is definitely a good candidate for a small cruiser if only a single spar is desired. See the following sketch.

THE NISSO BOAT  
DESIGN BY JANI OUGHTREE



Item 2: What are the main advantages or disadvantages to having one spar over two? Aboard a small cruiser you should be able to move around the boat quickly without running into things or being tangled in lines. If you do

have two spars they must be arranged so they do not interfere with the operation of the boat. The advantages of having more than one spar are many, it allows smaller spars, more control over the boat, easy and more controlled reefing and, most important, it allows you to have spars that are small enough so they can be handled by one person. This allows easier removal of the spars if needed. It should be noted that if a single mast is used it must be heavier than if two spars are used.

Item 3: A boom is a danger to the crew, the only choice here is to have a loose footed main or use a sprit boom. A loose-footed sail loses something off the wind but it could be lived with in the name of safety, and it would be nice to rid your self of the extra weight and stowage of the booms. The sprit boom raises the boom above the crew's head. One concern is that it spoils the sail shape by lying across the sail, but it's down low, so its effect is minor. Another concern is chafing of the sail from the boom rubbing against the sail, a sail maker can deal with this.

Item 4: The spars must not cause any damage to the hull structure. Using more than one spar reduces the concentrated load a single spar would place on a hull. In all cases, whether you use a single or double spar the hull must be built to handle the stress; a large safety factor is required in this area.

Item 5: Reefing must be done as quickly and trouble-free as possible. Any sail that is selected must be one that can easily take a reef quickly. Any sail that runs on a sail track or laces to its spar could be a problem. Careful design of the equipment is necessary.

Item 6: The boat must be designed so that removal or lowering of the spars will be possible under just about any sea condition. This is vital to the safety of the small cruiser. The spars must be as light as possible while maintaining the necessary strength requirements of cruising.

This series can be considered a basic guideline for judging boats suitability for cruising. Consider all the points made above before you have a designer design your boat. Or if you have the capabilities of designing your own boat, you now have an idea of what areas of the design could give you problems once its built and used.

(Conclusion)

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The dinghy design has now reached the stage where we can look to sails, centreboard, and rudder. In each of these aspects of design there is ample scope for individual thought. If you glance through one or two early books on sailing craft design, you will find there is little that has not already been tried in one form or another. For the purposes of this article I shall stick with convention, which will mean a fractional sloop rig, centreboard, and a fairly normal rudder shape. Apart from its inconvenience in shallow water the daggerboard has much to commend it, going more or less straight up and down its streamline shape remains in the best possible relationship with the water flow.

To offset against this, a pivoting board can be used to help trim the boat, depending upon the point of sailing; e.g., partially raising the board for reaching, which also has the effect of moving the centre of lateral resistance (CLR) further aft. The actual shape of the

## Design Rules - OK!

### Part 5

By Dennis Davis

Reprinted from *Afloat!*

board, both cross-sectional and plan (seen from one side) are open to considerable interpretation, in part depending upon the anticipated speed of the craft. Similar considerations apply to the rudder and the aspiring designer is urged, as ever, to seek out and study as many different types of craft within his sphere of interest as is possible.

Like centreboards, rudders can be made to lift or pivot, or indeed if you operate only from a deepwater pontoon it can be fixed. There may be some advantage in having a lift-

ing rudder, which can then have narrow "wings" at the bottom. These have the effect of preventing the water flow from sliding off the bottom of the blade, or conversely keeping the flow parallel to the chord (width), which is where it should be for best results. Whether this is a real or notional effect is open to argument, as is much else concerning boat design. The "wings" on the bottom of keels can be expected to have a similar effect and also increase the leeway, preventing effect of the keel as well as enabling a less deep keel to be utilized.

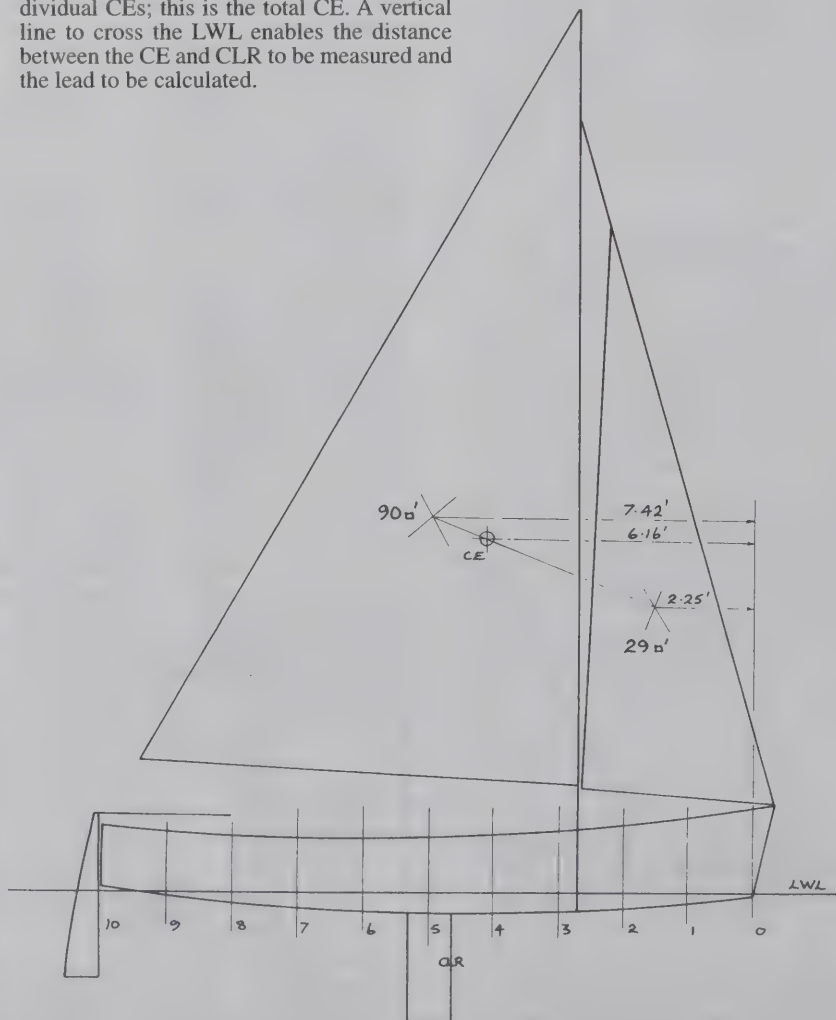
The Bermudan sail is used as much from convention as anything else. It requires a long mast, which normally has to be supported by standing rigging if a foresail is to be rigged. For racing it does have good windward performance, it can be "tweaked" during a race to improve performance depending upon the point of sailing, and on craft large enough to carry a variety of headsails, the sail area can be varied relatively easily to cope with differing wind strengths. For a cruising dinghy I think there are better rigs, but this is a matter of personal choice and prejudice. We shall not here be going into the various ways of tweaking the rig to obtain utmost performance, there are a number of excellent books available which will guide those of you who want to know.

So let us consider first where to place the mast. Since this is a dinghy and will have only one headsail of a fixed size, the mast can be set fairly well forward in the hull, roughly about the point of greatest depth is usual. Somewhere around station 3 will probably be satisfactory unless there are other considerations to take into account. For example, if the dinghy is to be used for cruising, you may wish to have the maximum length available for a clear cockpit floor for sleeping. With this in mind, let us compromise and have the mast 6" forward of station 3 for the purposes of the various calculations. It should rake aft a little, the drawing shows an inch at the top of the mast, this is partly aesthetic and partly practical. The aft rake will encourage the mainsail to swing aft rather than forward in windless conditions. How much rake is personal choice and depends to some extent upon the type of craft. Some, such as the coble, have extreme mast rake.

The next choice is that of sail area and here it is probably best to be guided by what has gone before until you have some experience. Have a look at what other similar craft are using, how it is divided between main and foresail, and the shape of the hull that is carrying it. You will find that similar craft usually have similar sail areas unless they are extreme craft of some type; e.g., some racing dinghies have a larger sail area than would be considered usual for a dinghy of their size. Somewhere in the region of 120 ft<sup>2</sup> will probably be about right for this dinghy since it is more for cruising than racing. With the mast set at 48" aft of station 0, it is possible to have a 10'0" boom without it overlapping the transom. An 18'0" luff (the forward edge of the sail) will require the mast to be about 21'0" long, not unreasonable for a 15'6" dinghy.

Before we turn to the drawing, let me say that this is diagrammatic rather than practical. For example, the leach (back edge) of the mainsail will normally be a convex curve to give a roach that is held to shape by means of battens. This is not essential, especially for

Sail area of a triangular sail is found by multiplying the height by half the base length. CE of individual sails is found by drawing lines from the mid points of the sides to the opposite apex, where they cross is the CE. Measure the distance of each CE from station 0. Multiply the individual sail area by its distance; e.g.,  $90 \times 7.42 = 667.8$ ,  $29 \times 2.25 = 65.25$ . Add these together and divide by the total sail area to obtain the combined CE.  $667.8 + 65.25 = 733.05/119 = 6.16'$ . Mark where this distance from station 0 comes on a line joining the individual CEs; this is the total CE. A vertical line to cross the LWL enables the distance between the CE and CLR to be measured and the lead to be calculated.



cruising, but may be an allowable method (under class rules) of increasing the sail area without penalty and will probably enable the sail to set better. Also, no actual spars are shown just to avoid complication. From the drawing you will see that the centre of effort (CE) of this rig, if extended to cut the LWL, comes out at 62" aft of station 0. We now want to arrange for the CLR to be aft of this to give a "lead." The lead is normally taken as a percentage of the LWL, what percentage is another matter for there is little agreement on this. For dinghies you will find it suggested as anything between about 5% and 15%, depending upon which author you are reading.

Just for the moment, to see how it works, let us assume a centreboard with a chord of 12", depth below the LWL of 36", centred on station 5. The centreboard case, which has to be open at the top, will probably need to be deeper than 12" if we are to avoid water slopping into the boat through the top opening in some situations. Trace around the underwater shape of the hull, including the centreboard in its fully down position, but not the transom

hung rudder, a skeg should be included if fitted. Cut out this tracing, make a fold along its length to stiffen it and then balance it on a knife or rule.

The line of balance will give the line of the CLR, the actual point of the CLR can be found by multiple balancing if required but it is not necessary for our purposes, it would be if we were adding ballast to our centreboard or keel. In my example, the line of the CLR comes just at the leading edge of the centreboard, giving a difference between the CLR and CE of 10", or a lead of 5.6%, which will probably prove sufficient. You may like to try playing around with your drawing and a tracing paper overlay to achieve varying leads by altering the mast or centreboard positions, perhaps adding a bowsprit or changing the sail areas.

You may be surprised how much change can be made without altering the lead very greatly. Don't be misled into thinking you have figures cast in concrete, the lead will be correct for only one point of sailing and at one wind strength. At all other times it will be dif-

ferent. For instance, as the wind increases in strength the CE tends to move aft, thus producing some weather helm, a good thing so long as it is not too extreme. Too much weather helm suggests reducing the size of the mainsail; i.e., reefing. In a dinghy the crew can usually rearrange their positions to make the boat trim when required to provide weather or lee helm according to the situation. Do experiment with other rigs using the overlay. Next time we shall review the series so far to consider some omissions and possibly expand on some aspects of design.

(To Be Continued)

## DENNIS DAVIS DESIGNS

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The idea of a concrete canoe may sound like a contradiction in terms, but how about one whose material is geared to be outer-space worthy, and whose conceptual design is so unconventional that it was once incorrectly applied to a bridge that consequently sank?

Yep, this is no ordinary canoe. In fact, the most pedestrian thing about it is the concrete part. Concrete canoes are not new; universities throughout North America have participated in concrete canoe competitions for at least 14 years. But there's never been a successful one built designed to achieve its natural resonance, and that's leaving many a structural engineer completely flooded.

A lot of people would say "You're nuts," said Robert Vaughan, a structural engineer at Marshall Space Flight Center. Structural engineers are taught to avoid building anything that may come into contact with a matching natural resonance. To do so is to invite disaster. Natural resonance describes the minute vibration frequency that every object has. If you get two objects sharing an exact natural resonance, it can lead to those vibrations being excited into stronger ones.

A famous example of this gone wrong is the Tacoma Narrows Bridge in Washington state. The bridge was inadvertently designed with a natural resonance equal to the vibrations created by the wind gusting through the narrows. On November 7, 1940, the wind blew with a fluctuating force that was exactly in resonance with the frequency of the bridge. The equal vibrations of the wind and the structure of the bridge caused the bridge to roll, buckle and ultimately collapse.

Some may be wary of getting into a canoe, concrete or not, if it were designed to operate when excited in this way. "It's operating on a paradigm. The prevailing concept is turned completely backwards," Vaughan said. But according to Dr. John Gilbert, faculty adviser at the University of Alabama in Huntsville, where the canoe is being built: "Half the great ideas people have come up with have

## The Advantage Of Resonance In Concrete Canoes

(From an Internet printout received from reader Don Stucke)

come from people not thinking in the normal way."

To achieve resonance, without falling apart, the canoe, known as *Survivor*, has to be made from concrete. The concrete is made up of a mix of Portland cement, glass micro-beads (microscopic hollow spheres), latex, acrylic fortifier and water. Mix these in the right proportions, allow the mixture to dry for 12 hours and presto, you have concrete so flexible that it will bend and snap right back with nary a crack.

"Our biggest claim to fame is that our concrete just doesn't crack," Gilbert said. "We can get more flexibility from this material than they can get in the aerospace industry." With this flexibility, the team hopes to push the 22' canoe to its natural resonance of 6Hz (six vibrations per second). "If our boat reaches this, it'll start to flex and the side walls will bend in together and then apart, like butterfly wings," Gilbert said.

"What we try to do is attain this natural resonance and then utilize the energy it creates and turn it into forward propulsion," Gilbert said. "The boat bends and deflects with very little energy input," Vaughan added. "You can cause something to move with very little energy input and then use the energy produced for something positive. It's a very innovative

and bright approach."

The canoe, which weighs 76lbs, took six months to build and cost \$1,200, is built around a mesh frame made up of strips of graphite fiber an eighth-of-an-inch thick. The cement is thinly applied over this mesh, "a little thicker than the diameter of a pencil," Gilbert said.

Gilbert admits that he still has a long way to go with the canoe. "We still need to do a lot of engineering and testing. I'm not saying that we are there yet. It's virgin territory but the underlying value of the technology is evident. It opens new horizons."

Despite Gilbert's reservations, *Survivor* has fared well in competition, finishing first against 24 other teams in the 2001 ASCE/MBT National Concrete Canoe Competition held last month in San Diego. "We won because we utilized the boat's natural resonance. The other teams had not looked into using this, although I am sure they will now," Gilbert said.

Gilbert is also very confident of the future of the canoe. "Before, it was thought of as ridiculous with no benefits at all but I believe it's going to be the boat that will make the difference on who gets silver and who gets the gold at the Olympics," he said. "Our boat can travel up to 14 feet per second. This is lightning speed compared to a regular canoe, which can go about 8 feet per second. An Olympic race canoe can probably go one-half foot per second faster than us," Gilbert said.

Others are not so confident of the canoe's Olympic prospects. "If we raced them over a straight-line course, his boat would be left for dead," said Charles Luckman, sprint program director for USA Canoe/Kayak. "It's a great project but it's primarily an engineering project. We have years of research in hydro-dynamics behind us," he added.

Canoe designer John Winters agrees. "They are not likely to replace conventional canoes because they are not light enough and are quite fragile," he said. "Once the competition is over they often end up in the landfills."



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## Bolger on Design

### Design #541

### Racing Schooner

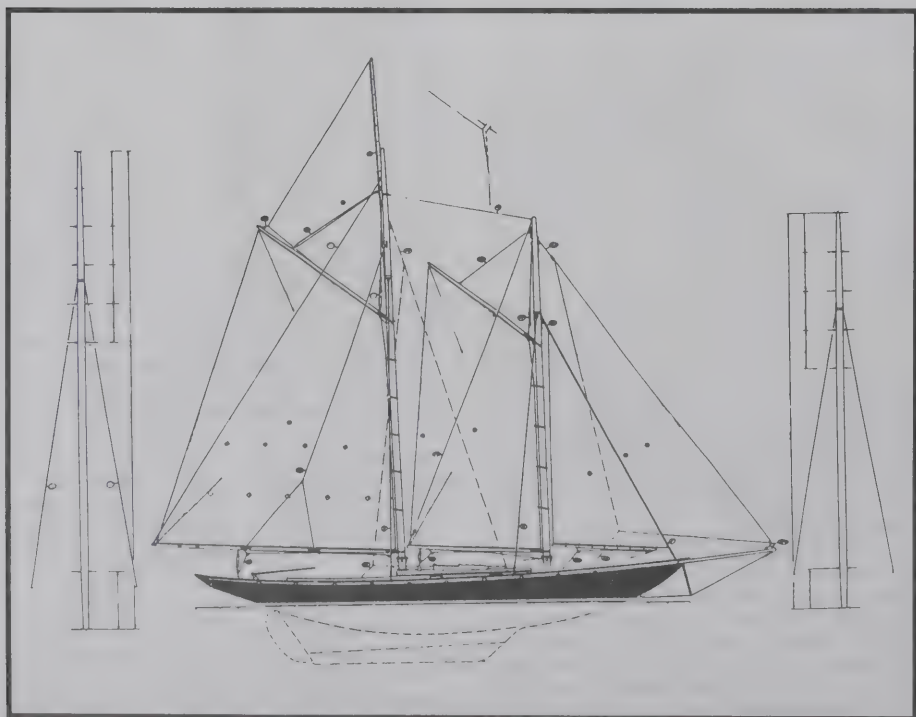
39'9" LOA - 28'10" WL  
 8'11" Beam - 4'6" Draft

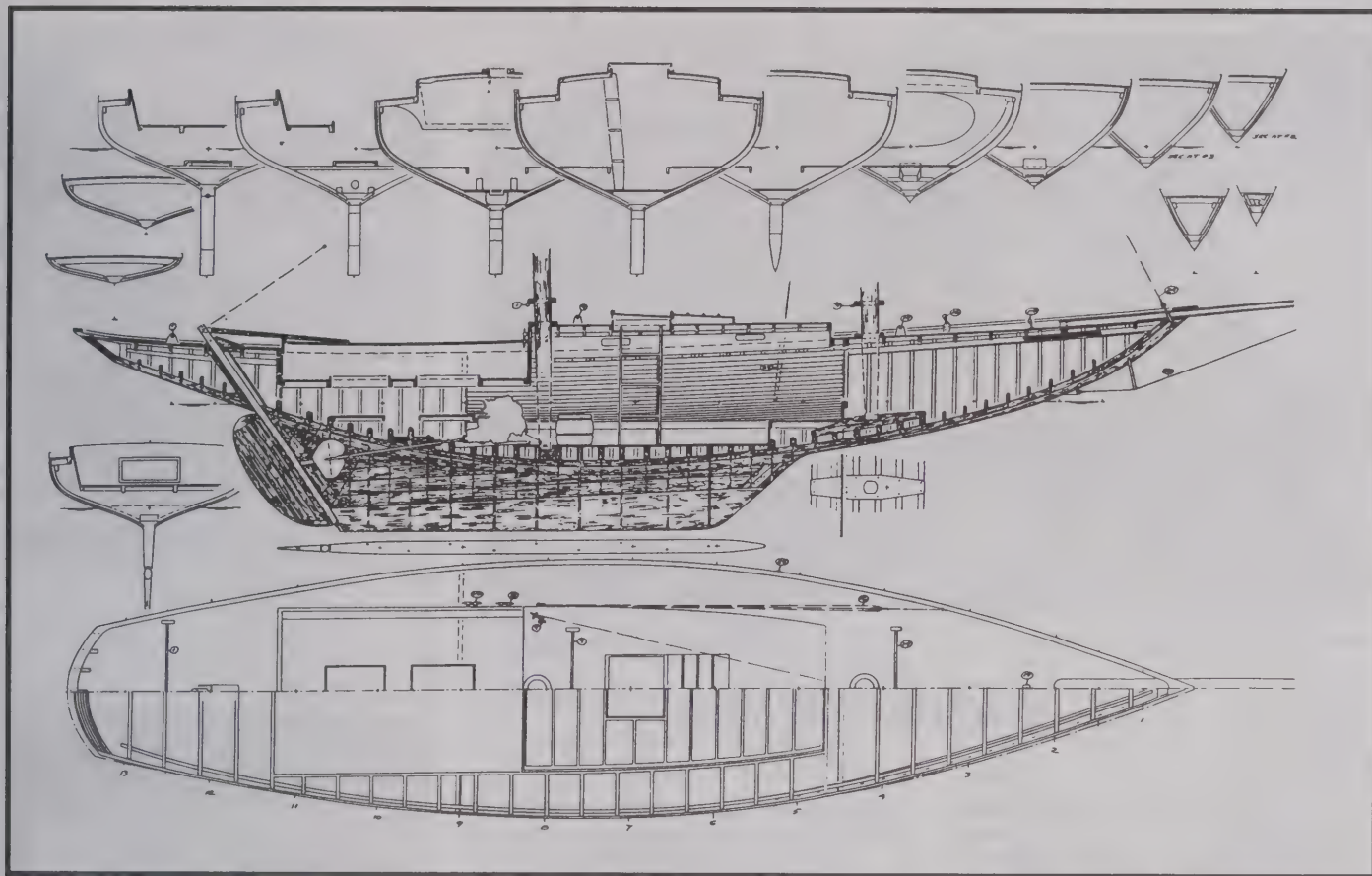
This was the first design of the series in *MAIB*, printed in June 1991. With it was described a scheme for Bradford Story in Essex to build four of them (for \$75,000 each). These were to be moored off Pavilion Beach in Gloucester Harbor and race regularly either with private owners or charter parties to liven up the waterfront with schooner sails and give good sport. Later I published the plans in Mike O'Brien's *Boat Design Quarterly* and in my book *Boats with an Open Mind*. Nobody in Gloucester or anywhere else showed any interest. The people I had hoped would be interested put their efforts instead into the poorly embalmed corpse of the great schooner *Adventure*.

These boats were supposed to be pure day racers, but with tight cuddies for waiting out a thunderstorm, some privacy (from people on deck) for mixed party toilet functions, and for thawing out on a cold day. They could have been arranged for spartan camp cruising with four pipe berths, not bad for staying overnight before and after racing at some other port. They would have been able enough to make coastwise passages without worrying about ordinary weather, and they would certainly have been fast and weathery by any standards below those of the most extreme current racers.

Nowadays, of course, we'd argue that they would be impractically deep draft and expensive, and that a much shallower boat, or one with a retractable keel and a hull shape adapted to a more economical construction, would give as much sport, and most of the visual effect, for a much lower first cost and maintenance expense. We would argue that such a boat could sail, and race, in a wide variety of pleasant places like the Annisquam River backwaters, Essex Bay, and Plum Island Sound, or Plymouth, Wellfleet, and Barnstable, and go among the ledges of other Massachusetts Bay coasts with less tension. By current standards 4-1/2' is not deep draft, but it denies a boat a great many places worth seeing.

Good sense notwithstanding, I can't help wishing that somebody would realize the design. To my eye it would be very beautiful, at rest or in action. That sheer line would hold me hypnotized as just a few boats have and do, the Francis Herreshoff *Rozinante*, Capt. Nat Herreshoff's Buzzards Bay 25, Al Mason's *Ostkust*, to name those that I've been held by





recently, there have been a few more over the years. This one would be in that class. I have to settle for the nice sailing model of her built by Ian Sharpe of Barrow-in-Furness, England. The photos show her on a local pond, but on a notable occasion she got away from her radio controller and voyaged clear across Coniston Water in the nearby Lake Country (Arthur Ransom country) and picked herself a soft berth on the other side to establish herself as a lucky ship.

Plans of #541 are \$300 to build one boat, sent Priority Mail, rolled in a tube.



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Launching from a flatbed utility trailer.



Afloat. That chain on the bow beneath the ramp is for attaching to trailer. Thought: Why not leave it on the trailer?

## First GP-16 Hits the Water

By Jim Betts

Well, we finally have some photos of the first GP-16 to hit the water. The ones being built in Florida and Australia are to launch this week, or next, or next. This one was built by Fred White of Kent, Ohio, but launched at his summer cottage in Canada.

Glad to report that all went well. Hit 21mph with Honda 50hp. Note the samson posts, more salty than store-bought cleats and a hell of a lot stronger.

My ads in *MAIB* pulling nicely. Got, so far (July 10) 47 orders for study plans and sold five sets of plans. Monday, I had three orders for plans from the [www.bateau.com](http://www.bateau.com) (e-boat)

site. I think that's a record for orders for any boat plan in one day. Any boat, any designer.

Will soon have a GP-20, as there is much desire for something a bit larger with possible enclosed head and sleeping inside. Also some interest in this as suitable for wheelchair users.

Wait until you see my new 57-footer (power) that sleeps (Ugh!) up to 24. Will send plan one day soon.

Herewith photographic "proof" that a GP-16 did hit the water.

Jim Betts, PO Box 1309, Point Pleasant Beach, NJ 08742-1309



Cutting doughnuts to be sure the steering works.

Underway. Well, why not drag a fender, as long as we're dragging a chain?



"I have returned." Not original, but appropriate.



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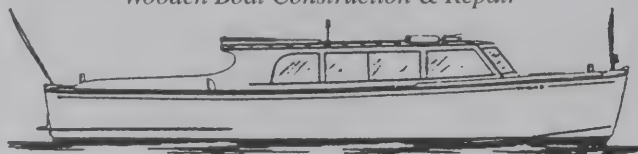
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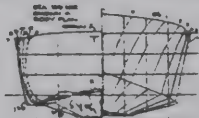
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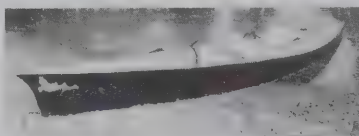
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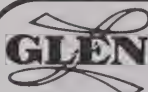


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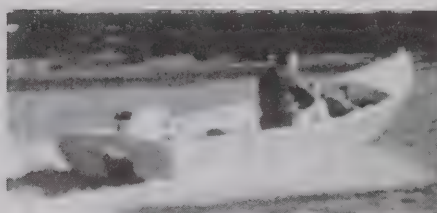
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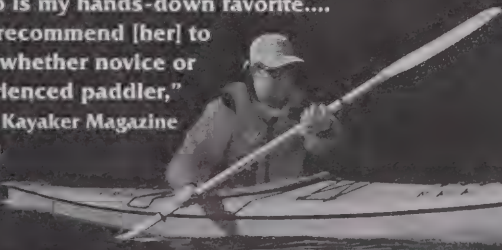
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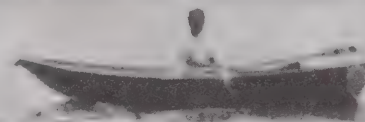
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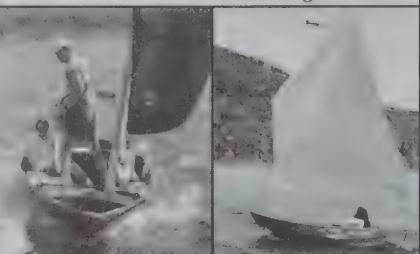
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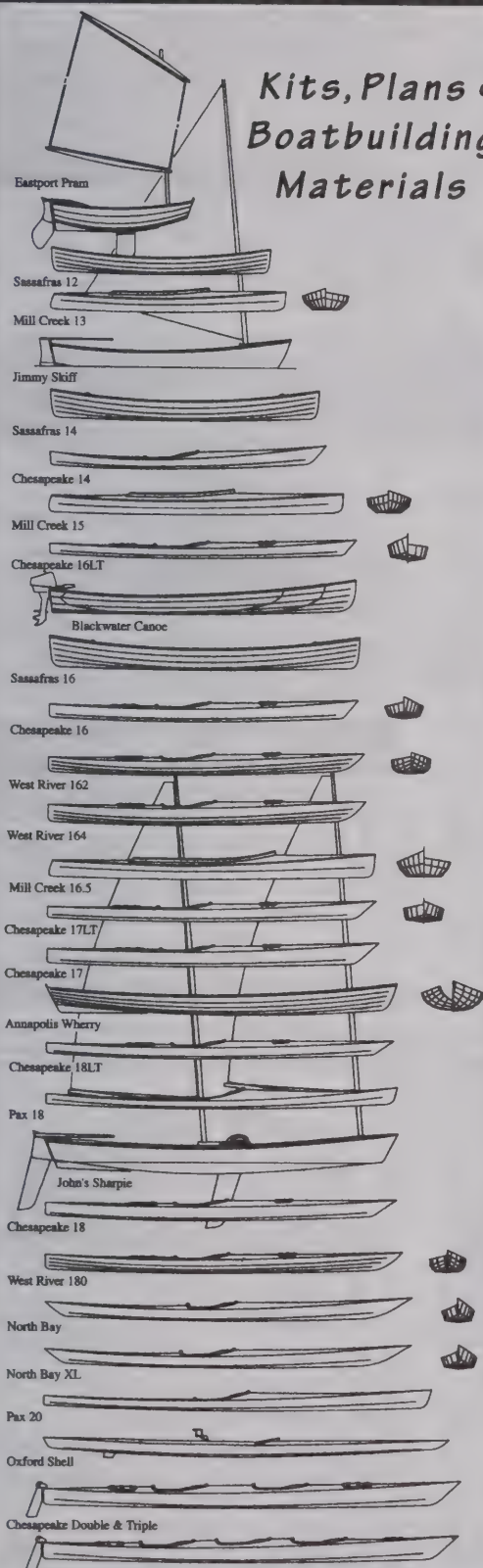
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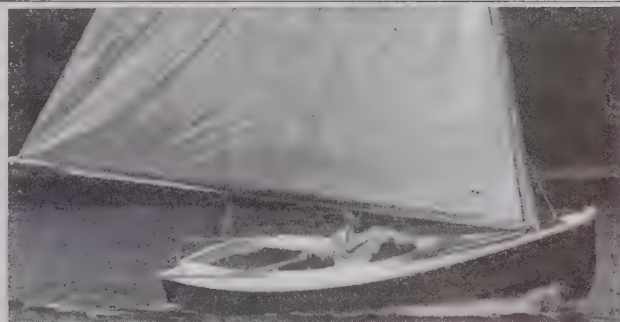
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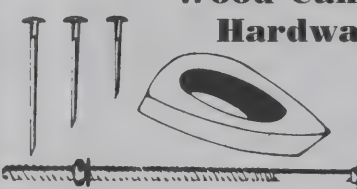
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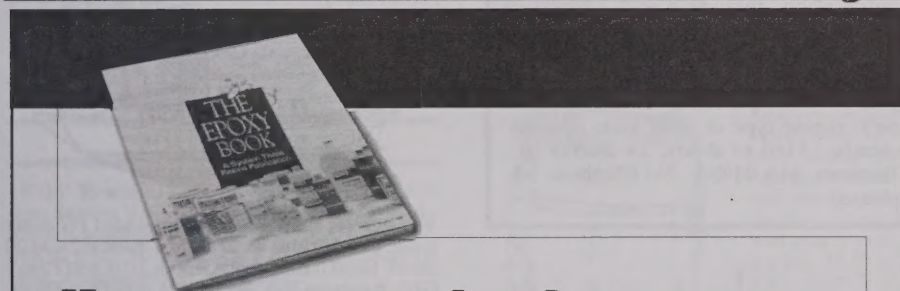
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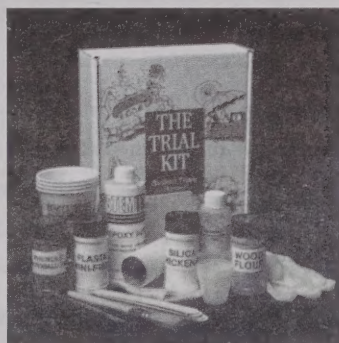
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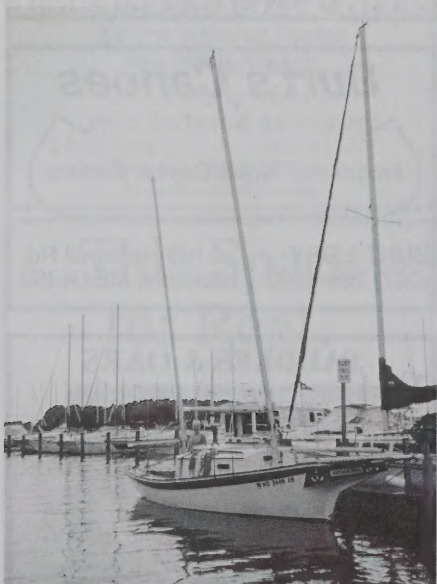
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## BOATS FOR SALE



**Windrider 16**, w/trlr. New Sail & mast ext. Over \$5,000 replacement value, asking \$2,500. JOE LA GRASSO, Fenton, MI, (810) 750-9188, <LAGRASSOJ@AOL.com> (TF)

**13'4" Old Pulling Wherry**, 2 stanchion in vy gd cond. ROY GUMPEL, Pawcatuck, CT, (860) 599-1568. (09P)



**23' Menger Skipjack Ketch Barbarossa**, '78 FG copy of Chesapeake 3 sail bateau. Draft 18"-5". Battened tanbark sails w/covers & lazyjacks. Slps 2.5 inside. Just returned from 2 wks gunkholing. 9.9 electr start low hr Johnson OB w/tank. Portapotti, propane single burner campstove in gimbal, water tank, compass, 2-way radio, knotmeter, manual bilge pump, cushions, throwables, life jackets, mozzzy net etc. Woodwork nds cosmetics. 4 wheel trlr nds attention to wiring harness & brakes before big road trip. Located at Maryland Marina, Baltimore, MD. \$6,000. HARVEY GAGNON, 358 E. Hewitt St., Marquette, MI 49855, <gagnonpatty@hotmail.com> (09)

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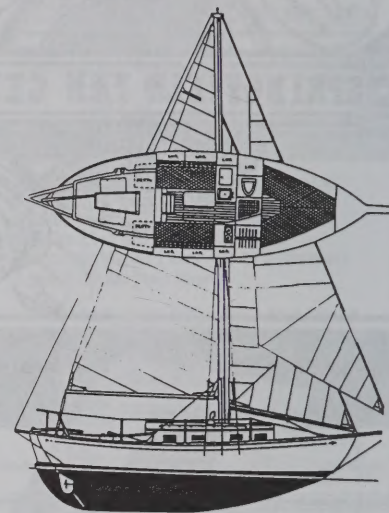
**Luders 16**, '46. 26' LOA, 4' Draft. Mahogany hull, spruce spars, all original bronze hrdwre. Main, jib, genoa, spinnaker & boom tent. Fully restored '99. Classic beauty located in MD. \$9,000. RICHARD PRANN, West Chester, PA, (610) 436-1127. (10)

**21' Piver Trimaran**, old but gd gear & TLC, new galv trlr, 3hp Yamaha, 3 sails, solar panel, cuddy cabin, daggerboard, kick-up rudder. Folds for trailering. \$3,500, located MA. DICK NEWICK, Kittery Point, ME, (207) 439-3768. (10p)

**'74 Luhrs**, solid hand laid hull, 32' x 12-1/2', single Chrysler gas engine, hull gutted, nds new deck & house. Compare our price \$4,000 their price for any 32' hull, JC or BHM or any other. **18' IMP**, FG w/ OMC stern drive, 235hp V8 engine. BO. **18' Glastron**, w/60hp rblt Johnson OB, low hrs. Motor \$2,500, boat free. STEVE WILLARD, Marblehead, MA, (781) 631-8462 aft 5pm. (10)

**12' Bolger Cartopper**, sprit rigged skiff on galv trlr, some accessories. \$650. BILL CLARKE, Baltimore, MD, (410) 931-0667 aft 6pm. (10)

**37' Russ Brown Proa**, serious fast sailing for 2, 7 sails, wood/epoxy, Merc 20, Loran, GPS, stereo. Nds paint & rudder work. Demountable. Located MA. \$22,000. DICK NEWICK, Kittery Point, ME, (207) 439-3768. (10p)



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**New Sunrise Dory Skiff**, 11'4", 4'6" beam. Jay Benford design, mahogany & okoume constr. Breast hook, knees, rub rail, transom & seats finished bright, topsides navy, inside buff, bottom red. 2 rowing stations. 85lbs makes cartopping easy. \$1,200. **'87 Susan Skiff**, 11'3", 3'10" beam. Blt by Rockport Apprenticeshop. Cedar lapstarke on oak, bronze fastened. Compl restored & setup w/new spars for sprit rig. Sail in gd shape. Designed by R.M. Steward for *The Rudder*. \$1,100. JOHN LARRABEE, Orland, ME, (207) 469-2670 aft 6pm, <johnbl53@yahoo.com> (09)

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**Paradox**, on gd galv trlr w/OB brckt, practically new sail. \$500. **Martha Jane**, on tandem axle trlr w/9hp OB, sails. Nds work. \$2,500. Wife Susan Archibald says "Sell!" She will negotiate for immediate sale & removal.  
BOB ARCHIBALD, P.O. Box 933, Steinhatchee, FL 32359, (352) 498-2111. (10)

'56 **Century Seaflyte**, 16' mahogany runabout, 25hp Johnson w/TeeNee trlr. Pristine. \$3,300.  
BRUCE WINSHIP, Rochester, NY, (716) 271-7838, <Bruce.Winship@USA.xerox.com> (09P)

**26' Telstar Trimaran**, new (larger) jib, 4 Doyle sails, Profurl on jib. Beam increased to 18', diesel, interior comfortable for 3. Located ME. \$30,000.  
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**13' Boston Whaler**, older model, 25hp Nissan OB, both in gd cond. New trlr. Located Buzzards Bay, MA. \$2,500.  
ROBERT CITY, Boston, MA, (617) 523-8069 aft 6pm. (10)

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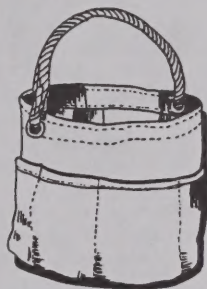
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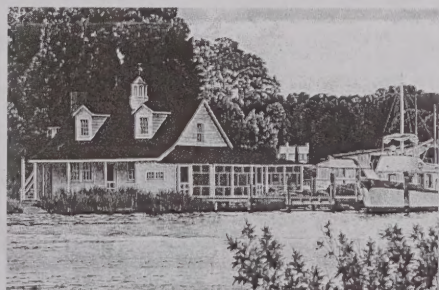
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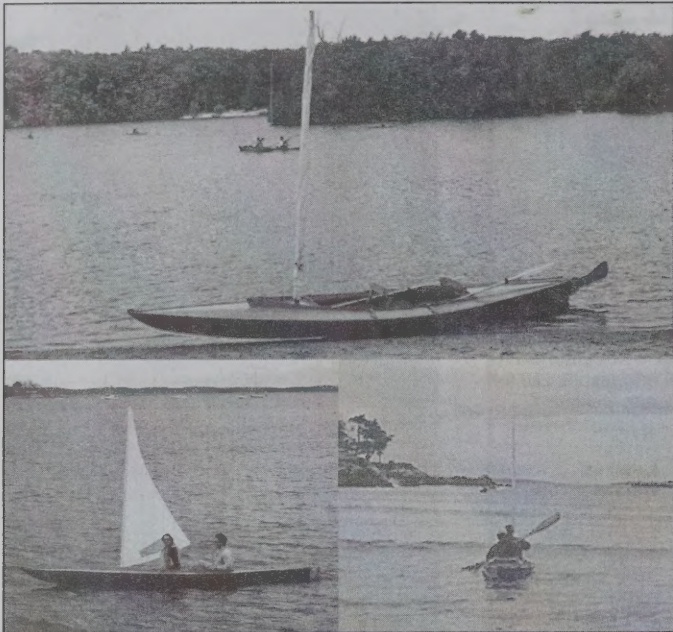
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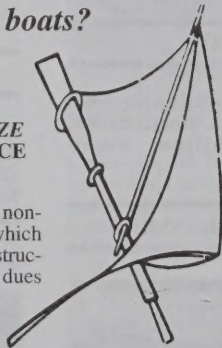
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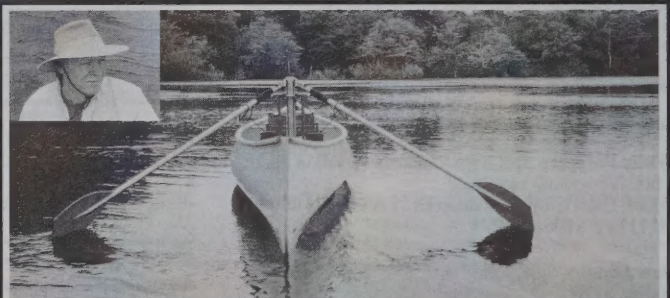
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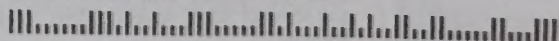
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