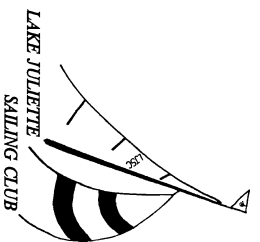


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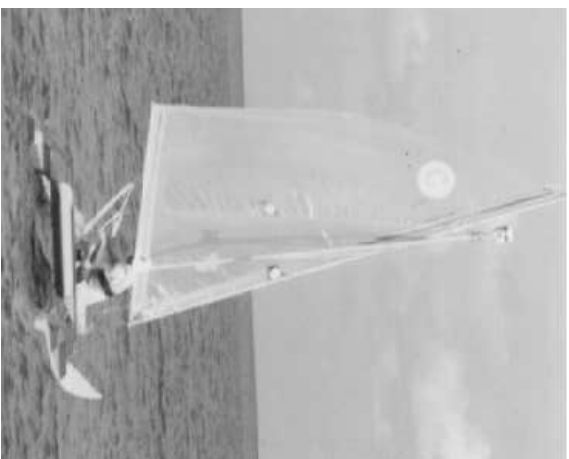
# *JULIETTE*



# RUDDER

Volume 10 No. 8

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# *JULIETTE* **RUDDER**

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The RUDDER is the official publication of the Lake Juliette Sailing Club. Statements and opinions appearing herein are those of the authors and do not necessarily represent the group position of the Lake Juliette Sailing Club. The editor reserves the right to edit all material for publication and to publish only that material which is felt to be in the best interest of the Lake Juliette Sailing Club.

2000  
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WHAT I WOULD LIKE TO DO (Pick one or more)

- RACE COMMITTEE ASSISTANCE  
 SPECIAL COMMITTEES AS REQUIRED FOR EVENTS  
 CLUB ADMINISTRATION

EVENTS AND ITEMS I WOULD BE INTERESTED IN:

- |   |   |
|---|---|
| <input type="checkbox"/> FUN RACES      | <input type="checkbox"/> COOKOUTS       |
| <input type="checkbox"/> HANDICAP RACES | <input type="checkbox"/> RAFTUPS        |
| <input type="checkbox"/> CLASS RACES    | <input type="checkbox"/> BEACH PARTIES  |
| <input type="checkbox"/> EXCURSIONS     | <input type="checkbox"/> SOCIAL DINNERS |

the 35-mile wide Albemarle Sound in these conditions we put into a marina for only the second time this trip. Next morning early still on a broad reach, but much reduced wind we enjoyed a great 35-mile sail to Elizabeth City N.C.

Elizabeth City is famous for its welcome to ICW cruisers. With 14 free 48 hour slips right downtown and the famous welcome of the "Rose Buddies". Fred Fearing (86) has been greeting boaters since 1983 and took us, another couple in a sailboat and two women in a powerboat to his house for cheese, wine and sea stories. We hated to leave Elizabeth City and almost didn't get to, they were working on the bridge and it didn't open one day. Elizabeth City is the southern entrance to the Dismal Swamp Canal so we called on the Yamaha for the next couple days. Books have been written about The Great Dismal Swamp Canal but one of the nicest things was a welcome station on the N.C./Virginia line where we stopped and spent the night.

For the first time we got to go through a lock only an 8 foot drop then the lock tender gets in his truck and drives down to the next bridge and opens it for you. At the last lock and bridge the lock tender told us about a nice over night anchorage at Norfolk. That's where we are now. A great little cove completely round with just a small opening for a small boat. For the first time this trip we have a rainy day and what a great place to hole up. Its one of those places that you know at the time will stay with you to the grave.

One of the best reasons to visit Beaufort N.C. is the Maritime Museum. It's free and one of the best ever, with its own library filled with sea books and all kinds of reading material. We spent a lot of time there and enjoyed talking to Francis E. Bowker, one of the last men alive that sailed on the old tall ships. He left us with this poem.

The rocks and reefs and winter gales  
Have cleared the seas of tall gray sails  
And boys today can never see those ships,  
Hull down that called to me

Capt. Fred Veator/Zephyr

## MAINSHEET



Here it is August and we have not "wore out" a sailboat this year! What with one problem and another we have not had the time to go to the Club and step on the boat that is sitting there ready and waiting (OSYC or TYC).

Hope you are enjoying this lovely weather and wind to get in lots of sailing time. Received a card from Fred and Helen they were sailing the Chesapeake Bay and having a ball.

When you are on your boat Keep SAFETY FIRST. Check that you have a harness (accessible) to be used at night or in bad weather. If alone trail a line with a knot or loop in the end in case you go overboard and need assistance to get back on. Old timers say never cleat the jib so that the boat would turn into the wind if suddenly unattended. Especially if you do not have a "dog" to sail your boat. (remember Boston?)

We enjoyed a good slide show on the trip to Palatka presented by Melise. The scenery was beautiful and so were the boats. Melise we appreciate the time and effort you took to do this for us. Many Thanks! We are looking forward to your next one. If you missed this one plan to be there at the next showing!!

It was announced at the last meeting we would have a speaker at this coming meeting, sorry but there were conflicts and it will be the September meeting. It will be worth waiting for. Congrats to Walt Stewart for the answer to the last quiz. This was the first time for one to be answered correctly. Way to Go Walt!!

The meeting this month (Aug. 15) will be one you don't want to miss!!! Looking forward to seeing you there.

QUIZ: What is the total number of officially recognized distress signals that could be used and what are they?

*Miriam*

## LJSG 2000 Sailing Calendar

### *August Edition*

- July 1<sup>st</sup>. – 4<sup>th</sup>. Fourth of July Cruise – Panama City  
18<sup>th</sup>. Club Meeting – Piccadilly Cafateria – Macon Mall
- Aug 15<sup>th</sup>. Club Meeting – Logan’s Roadhouse, Arkwright Rd.
- Sept 1<sup>st</sup>. – 4<sup>th</sup>. Labor Day Cruise – Clarks Hill  
Alternate – Charleston, SC  
9 Treasure Hunt & Commodore’s Dinner – at OSYC  
10 Father’s Day Race - at OSYC
- Oct 7<sup>th</sup>. – 9<sup>th</sup>. Cumberland Island Cruise  
??? Golden Open
- Nov 10<sup>th</sup>. – 12<sup>th</sup>. Apalachicola Cruise

Additional events not yet scheduled

Moonlight sail

## Notices

The August meeting will be held at 7PM at Logan’s Roadhouse, located on Arkwright Rd. about a block north of I75. We will be discussing events including the Labor Day Weekend Cruise, the Annual Treasure Hunt & Commodores Cookout, and the Fall cruises in Oct & Nov.

For Sale:

Hobie 18 Magnum, 1984, Original sails, trampoline and wing canvas replaced early 90’s, trailer w/ spare tire, catbox for sail and dagger board storage. Asking \$3000 Bob Horan, 929-1377, or Bob@Horan.net

## Log of the Zephyr (2000 ICW Cruise Part II)

The Wedding Singer had sung his last song and out of town guests were going home. Helen and I joined the exodus by getting in the rental car and driving back to North Carolina. We had picked Beaufort N.C. to leave Zephyr for a couple reasons. One was I had an old Air Force buddy who still lived there and you can’t find a town much more cruiser friendly. After a couple nights ashore with Howard it was good to enter Zephyr with its familiar smells.



To get back used to shipboard life we decided on a side trip, over the 4<sup>th</sup> of July weekend to Lookout Bite. About 10 miles on the outside on a great sailing day it was good to feel the pull on the tiller and wind in the sails. Like a kiss from a long absent love. After a couple days in the excellent anchorage in Lookout Bite and long walks ashore it was time to catch the tide going back into Beaufort inlet. The wind had come around to a wholesale outfit from the south, great if we were going north but, not to get back to Beaufort. With sheets pulled tight we began a wild ride through the roughest seas I have sailed through. A 38 ft sailboat that left with us was coming half out of the water as we made our way through the “Grave Yard of the Atlantic” back to Beaufort. With all hatches closed and Helen down below for the first time the Zephyr took a wave over the side that filled the cockpit. In no time it was empty, thanks in part to the engine well, all that was left was what was running off the Captain. It felt good to drop the hook again in Taylor Creek and sit back and watch the fire works in Morehead City.

Howard sailed with us to the free 48-hour dock at Oriental, where Audrey picked him up for the ride back to Beaufort. Once again we got into a routine of going from one coastal town, staying a couple days, then sailing anywhere from 20 to 50 miles a day. (mostly 20) Coming out of the Alligator canal into the Alligator River (10 miles wide and 45 miles long) small craft warning were out and wind and waves were up. With 2 reefs in jib and one in main, we bruised the water on a 7-knot broad reach. Not wanting to cross

higher, motor sailors lower. The ratio is independent of boat length (see “chart” page).

VELOCITY RATIO =  $1.88 * lwl^{.5} * sail\ area^{.33} / disp^{.25} / hull\ speed$ . (dimensionless, high is good). The numerator of the equation calculates potential maximum speed, using an empirical relationship. Boats with a generous sailplan and light displacement will have a velocity ratio greater than 1. Under powered or extra heavy boats will be less than 1.

I would like to have the Father’s Day Race on Sun the 10<sup>th</sup> of Sept following the Treasure Hunt that is scheduled for Saturday the 9<sup>th</sup>. If you are interested in racing on the 10<sup>th</sup> please let me know so we can plan for it.

Linda & I are going to Charleston for Labor Day Weekend. We are staying at the downtown marina if anyone wants to go there instead of Clark Hill give me a call.  
Ron



## Racing Corner

By Ron Katz

This is some stats from San Juan web page I thought the other club members may find interesting & would like to put the numbers to their own boats to see how they stack up.

Performance Specifications for the 23 Foot San Juan Models.

Designer—> (Mark I)	Clark	
Displacement (lbs.)	2700	
Added “Junk” (lbs.)	100	
Ballast (lbs.)	960	
LWL (ft.)	20.3	
LOA (ft.)	23	
Beam (ft.)	8	
Draft (ft.)	1.9 / 4.75	
Head Room (ft.)	5.8	
Sail Area (ft <sup>2</sup> ) (100% Jib)	234	
Rig I (ft.) (Foretriangle Height)	28	
Rig J (ft.) (Foretriangle base)	9.5	
Rig P (ft.) (Mainsail Luff)	24	
Rig E (ft.) (Mainsail foot)		8.75
Hull Speed	6.0	
Displacement/Length Ratio	149	
Sail Area/Displacement Ratio	18.8	
Velocity Ratio	1.19	
Ballast/Displacement Ratio	0.34	
LOA/Beam Ratio	2.88	
Capsize Risk	2.19	
Comfort Factor	12.8	

**BALLAST/DISPLACEMENT RATIO** = ball/disp (dimensionless, should be 0.25 to 0.5). One indicator of stability, but the center of gravity, center of buoyancy Vs heel angle, and total weight is needed for a complete picture. Values range from a low of .25 to a maximum of .5. Another way to estimate stability is to divide the boat's roll period (seconds) by the beam (meters). Values less than 1 are "stiff". Values greater than 1.5 are considered "tender".

**CAPSIZE RISK** = beam/(disp/.9\*64)<sup>.333</sup> (dimensionless, less than 2 is good). An empirical factor derived by the USYRU after an analysis of the 1979 FASTNET Race. The study was funded by the Society of Naval Architects and Marine Engineers. They concluded those boats with values greater than 2 should not compete in ocean races. Values less than 2 are "good". The formula penalizes boats with a large beam for their high inverted stability, and light weight boats because of their violent response to large waves, which are both very important during violent storms. It does not calculate static stability. Some modern coastal cruisers and many racing designs have problems meeting this criteria. An interesting note, the study concluded that static stability was relatively unimportant in predicting dynamic capsize. Beam and weight were much more important factors. Wide boats give waves a longer lever arm to initiate roll and light weight boats require less energy to roll over.

**COMFORT FACTOR** = disp/(.65\*(.7\*lw+.3\*loa)\*beam<sup>1.33</sup>) (dimensions of "length" to the 2/3 power, 20=RACER, 60=CRUISER). An empirical term developed by yacht designer Ted Brewer. Large numbers indicate a smoother, more comfortable motion in a sea way. The equation favors heavy boats with some overhang and a narrow beam. These are all factors that slow the boat's response in violent waves. This design philosophy is contrary to many modern "racer/cruisers", but it is based on a great deal of real blue water data, not just what looks good in a boat show. A value of 30 - 40 would be an average cruiser. Racing designs can be less than 20, and a full keel, Colin Archer design, could be as high as 60.

**DISPLACEMENT/LENGTH RATIO** = disp./2240/(.01\*lw<sup>3</sup>) (dimensionless, if you ignore the constant "2240" that converts displacement from pounds to long tons, low is good). ".01" is another constant that scales the result. Probably the most used and best understood evaluation factor. Low numbers (resulting from light weight and long waterlines) are associated with high performance. Cruising designs begin around 200 and can go up to the high 300's. Many racing designs are below 100. The general trend for new designs is towards lower ratios and high performance. The trade off is more violent motion in storms, which requires constant attention to steering and sail trim, resulting in crew fatigue.

**HULL SPEED** = 1.34\*lw<sup>.5</sup> (dimensions of "Length" to the 1/2 power, high is good). Another empirical formula generally regarded as the highest practical velocity for a displacement boat (in KNOTS) assuming a reasonable power input (2-3 hp per ton). The higher the speed, the "longer" the hole the boat makes in the water. A short boat falls into this hole at lower speeds. An enormous amounts of power (50-100 hp/ton) is required to "climb out" of this hole and transition to higher speeds (planing). Large overhang (the difference between LOA and LWL) helps by tending to make shorter boats appear longer, but interior volume is lost.

**LOA/BEAM RATIO** = loa/beam (dimensionless, 3-4 are "fine" hulls). This ratio measures the fineness of the hull. Fine hulls, 3.0 - 4.0 and higher, are long and slender which promotes easy motion, high speed (low drag), and good balance when heeled. Newer designs favor wider hulls which have larger interior volume, sail flatter, and have high down wind speed potential. One note of caution when making comparisons, longer boats tend to be finer than short ones. This effect is plotted on the "chart" page.

**SAIL AREA/DISPLACEMENT RATIO** = sail area/(disp/64)<sup>.666</sup> (dimensionless, high is good). "64" converts displacement to cubic feet. This is basically a ratio of power to weight, calculated using a 100% jib. Most monohull designs range between 16 to 18. Racers can be much

