Evaluating Modern Catamarans

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Catamarans have been around, especially in the Pacific Ocean, for several thousand years. Early islanders in the Pacific sailed large twin hulled canoes many thousands of miles, generally from Southeast Asia east, to discover new island homes when their original ones became a problem.

Modern multihull production started with the catamarans of Hawaiian Rudy Choy in 1947. The first cruising catamaran to circumnavigate was his World Cat in 1965. During that same time Prout and Catalac of Great Britain were starting to produce catamarans. Catamaran production took off in the late 1970s and early 1980s with French builders Fontaine Pajot, Catana, Lagoon and Gemini in the US producing catamarans for the charter industry. Soon afterwards South African builder St Francis got started with a 43' cat in about 1990, and now a dozen others in South Africa produce about 30 percent of the world's cruising cats.

With the number of catamarans out cruising steadily on the rise, there are many designs to choose from. But not all are created equal, and some features are more desirable than others for full-time cruising. After lots of research and three years aboard cruising full time, here are our thoughts on some important features and characteristics to look for.

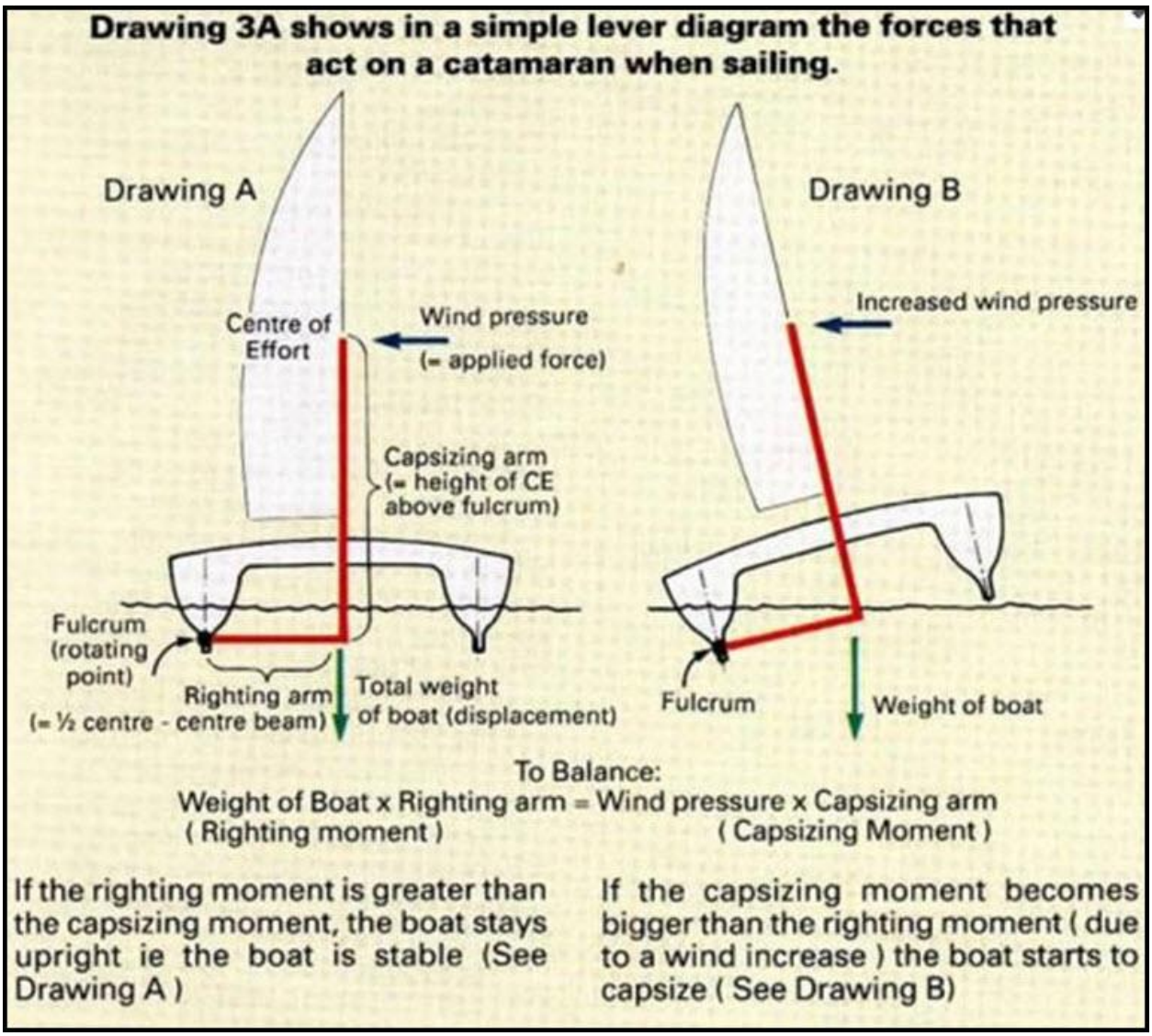
Size vs cost- As with all boats, as size increases, so does cost. We think a cat of 42-50' makes a good cruising home. Much shorter than this size, sufficient load-carrying capacity for two people cruising full time suffers. Much more, and the hull and equipment costs skyrocket.

Bridge Deck Clearance (BDC)- BDC affects the amount of noise in the boat from wave slap while going upwind. Ideally we would want a cat with about 24-30" of clearance. Longitudinal under-bridge deck fins, reducing speed, and falling off the wind can all help reduce the problem. Increasing BDC means more windage, which is a negative. However, consider how often you actually go close upwind when cruising, versus how much time you spend in port and on other points of sail.

Load Carrying Capacity (LCC)- Larger boats have more LCC for fuel, water, stores and equipment. Boats with finer hulls are better upwind than boats with fat hulls but will have less LCC. Most full-time cruisers will need at least 5,000 lbs of LCC.

Beam to Length Ratio (B/L) & Stability- For boats in the 45-50' range the B/L ratio should be around 50%. Much less B/L will adversely affect stability in heavy beam winds. More B/L adversely affects sailing characteristics. Most modern cats are in that range; older cats are

somewhat narrower but also have shorter rigs. For much more on this important characteristic Google 'Catamaran Stability'.



Integrity and Quality of Build- There is a big difference in build quality across manufacturers of catamarans. Things to look for include hardware strength and quality, light-weight construction materials, anodizing vs painting of aluminum extrusions, interior woodwork and exterior finish, and equipment quality and installation technique.

Helm Placement- The primary helm station should be well out of the weather, have unobstructed visibility to all four corners of the boat, be quickly accessible from the cockpit and have all controls available. Double helm stations, especially those aft on the hull decks, flying bridges, and those requiring looking through the saloon windows to see forward, all are problematic. The best option is a single helm station on the forward cockpit bulkhead, well protected from wind and water, and with a good view in all directions, especially forward.

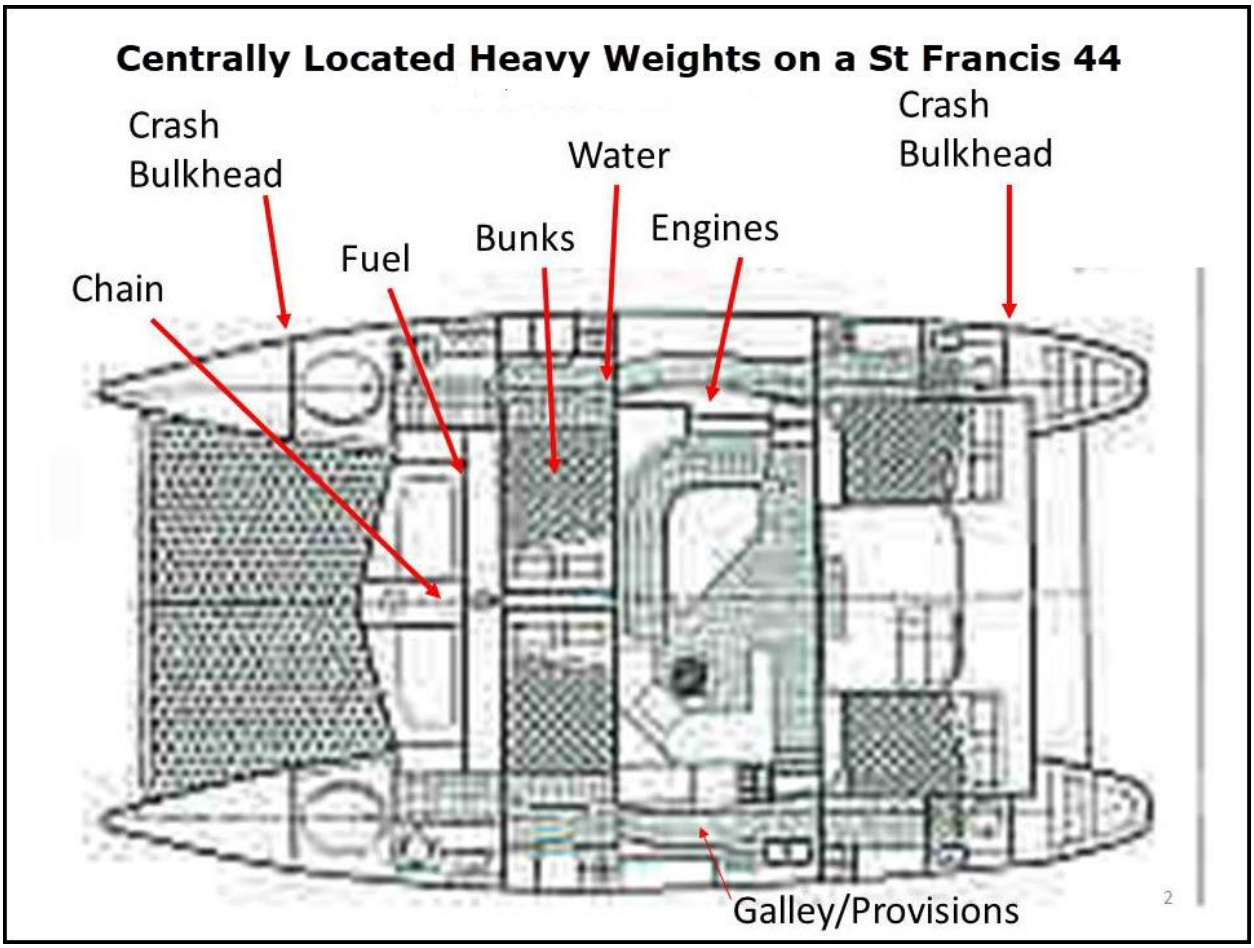
Rigging & Sails- In case of a failure, doubled shrouds and head stays are much better than singles. Well-rigged modern cats usually use shrouds leading directly from the mast to deck edge chain plates and vertical diamond diagonals over the spreaders to hold the mast in column. No backstay is rigged due to the aft leading shrouds and because of the size of the roach in the large mainsail. Consider if a vang and preventers can be rigged and the 65' height restriction for the US inland waterway.

Galley Location- On cats less than about 50' a large galley with adequate storage in the saloon is a problem because the navigation station, dinette table and seating, and three entry/exits all are competing for space there. Ideally a large refrigerator, pantry and significant galley storage would all be co-located and on the same level with the galley. Further galley clutter and light contamination are problems in galley up boats. Galley up may be attractive for week long charters, but for these reasons we and many other serious catamaran cruisers prefer the galley down arrangement for cruising.

Construction- Older cats made of plywood or cored with balsa are often a maintenance problem. The best construction practice is to make the underwater hulls of solid fiberglass and topsides and decks of foam-cored fiberglass. Solid underwater sections are easier to repair and

make adding thru-hulls less of a problem. If enough of the boat is made with light-weight cored fiberglass, the hull will not sink in case of a major collision!

Engine & Power Train Options- Power train location on a light-weight catamaran affects pitching in a seaway, so a central location is better. A watertight bulkhead between the engine and main cabins prevents major flooding in case of shaft or sail drive damage. Engines under bunks and accessible only from aft deck hatches are a problem for routine maintenance and underway repairs, especially in rough weather. Sail drives simplify installations but aren't as robust as a traditional transmission and shaft installation.



Stub Keels vs Dagger boards- Most cruisers prefer stub keels over dagger boards because they allow drying out on keel bottoms, give extra tankage and a double bottom, include a deep bilge and protect props & rudders from grounding damage. Dagger boards allow slightly higher pointing ability at speed in a narrow upwind steering angle, but the trunk and board are hard to clean and paint, can get stuck, and they are vulnerable to grounding and floating debris.

Liquid Capacities- We think an onboard fuel capacity for a 1500 nm range on one engine and about 150 gallons of water are ideal for full time cruising overseas. A mechanically driven, large capacity simple watermaker makes good sense in order to reduce the weight of sufficient fresh water aboard. Electrically-driven units are subject to common electrical problems.

Refrigeration- We prefer a separate 8-10 cuft side loading refrigerator for its convenience and a top loading freezer of about 3-4 cuft for efficiency. Insulation values of R20 for the refrigerator and R30 for the freezer are necessary for best efficiency. The closer the refrigerator is to the galley, the better.

Ground Tackle- Look for double anchor rollers, strong bridle attachment fittings and good ground tackle storage arrangements. Ensure bridle attachment and removal can be done quickly, muddy chain can be washed effectively, and the chain locker is deep enough so that the chain does not develop chain castles.

Cockpit Covers- A well-designed solid cockpit cover should be able to prevent rain from entering the cockpit through the use of removable front and side covers, facilitate access to the back of the boom and mainsail, allow for mounting solar panels and be able to collect a significant amount of fresh rain water.

Saloon Windows & Doors- Extra strength here is required to prevent large breaking waves from flooding the boat. Thick polycarbonate/Lexan or safety glass are best; plexiglass/acrylic should not be used. Inspect the window mountings and door hardware carefully.

Ventilation- Multiple, opening hatches and ports should ventilate every space, especially the saloon, galley and sleeping quarters. We have 14 hatches, 6 ports and two escape hatches, all opening. Escape hatches provide excellent ventilation, should be large enough for you to pass through, and be located at least 18" above the waterline to prevent flooding while open at anchor.

Crash Bulkheads- Modern cats should have crash bulkheads to prevent collision flooding located forward and aft in each hull. They should be well sealed from adjacent spaces and have door lips well above the waterline. Heavy gear should not be stowed in them.

As you can see there is plenty here to consider before purchasing a cruising catamaran. Much more is on the internet. Many modern cats are built for the lucrative charter trade and have features that don't work well for full-time cruising. Some of these can be corrected or improved, some cannot. Be suspicious of exaggerated dealer claims, ask for proof of anything that doesn't seem right and ask hard, detailed questions Consider making a complete list of what to look for before going aboard a potential purchase.

There is no perfect cat with all the features you will want, so be prepared to compromise somewhat. Photos and much more detail is available on our website here under *Evaluating Modern Catamarans*:

http://www.svsoggypaws.com/presentations.htm

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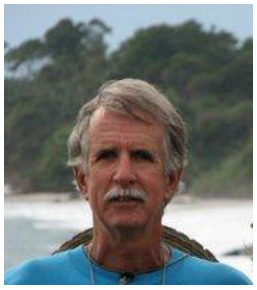

Dave McCampbell is a retired US Naval Diving and Salvage officer with over 40 years cruising and 8 sailboats worth of maintenance experience. He and wife Sherry, based in the Philippines for the past 4 years, recently have cruised the Philippines and SE Asia. Earlier they spent 8 years slowly crossing the Pacific. They have sold Soggy Paws, their CSY 44 monohull of 19 years, and moved to the 'enlightened side', purchasing in 2015 a St Francis 44 catamaran also named Soggy Paws.

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