

The junk rig claims a long, impressive ancestry

If It Was Good Enough for Slocum . . .

by John Campbell

Captain Joshua Slocum completed many remarkable voyages before his singlehanded circumnavigation in *Spray* which he started in 1895.

Born in Nova Scotia of English parents, this farmer's son got his first command, aboard an American coastal schooner, at the age of 25. Before too long he was promoted to the command of the bark *Washington*, which he sailed to Australia.

There, Slocum met and married Virginia, who moved on board *Washington* for a honeymoon voyage to Alaska. Virginia gave birth to seven children over the years, but only four survived infancy. *Washington* was lost in a gale off Alaska, but the owners held no blame against Slocum. He soon got his next command.

By the age of 37, in 1881, Slocum was captain and part owner of the 1,800-ton fully rigged *Northern Light*. Taking his wife and children with him, he sailed the ship to Liverpool, then traded to Yokohama and Manila. She almost sank off South Africa in heavy weather, but after temporary repairs returned to New York to complete a circumnavigation.

The days of sail were already numbered, and it was not economical to refit such a large ship, so Slocum sold his share and bought the smaller single-decked bark *Aquidneck*. He found a cargo for South America and, still accompanied by his ever-faithful Virginia, sailed for Buenos Aires.

The sea had taken its toll on Virginia's health, and she became sick on the voyage. When she died at Buenos Aires, Slocum was

distraught. His life seemed to lose its purpose for the next two years, until he met and married his cousin Hettie.

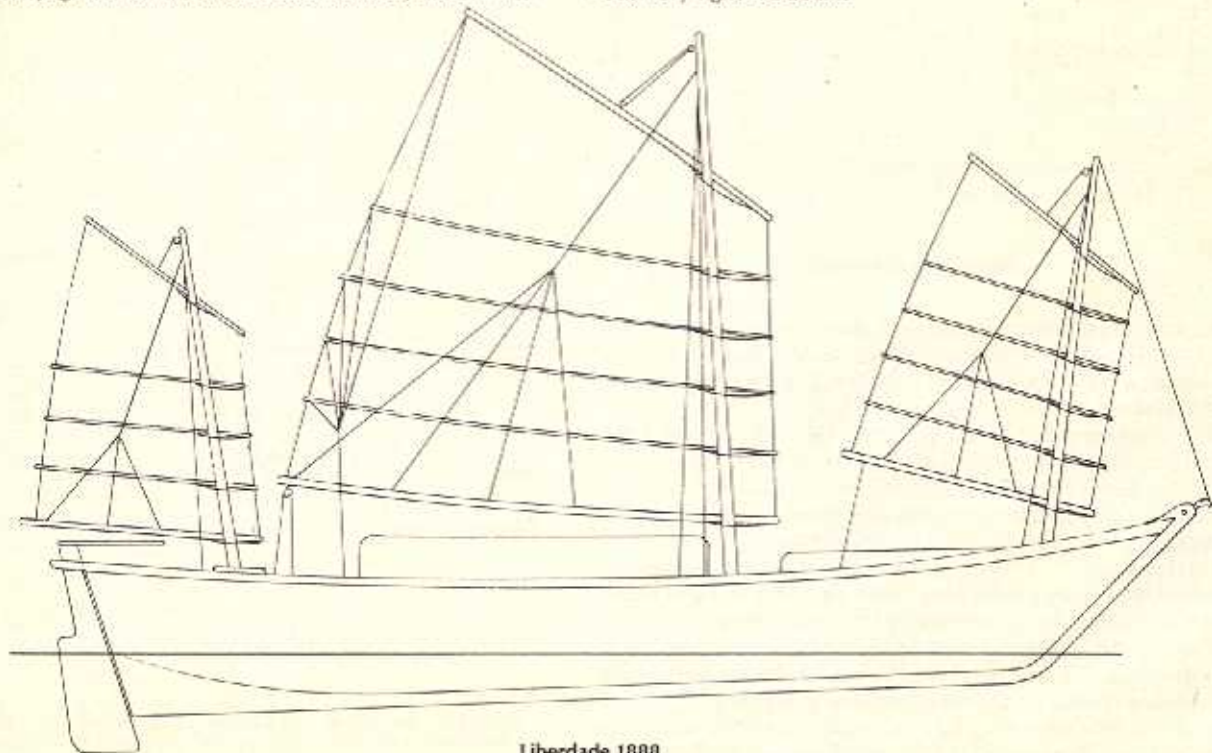
Hettie made a honeymoon voyage to Montevideo with Slocum and his 5-year-old son Garfield. Slocum's oldest son, 15-year-old Victor, signed on as a mate and together with 10 crew they sailed south.

The voyage was beset with troubles. Difficulties with the Brazilian government caused a great financial loss, and during an attempted mutiny, Slocum was forced to shoot two of his crew. Finally, *Aquidneck* was stranded and wrecked while trying to get out of Paranagua Bay.

The almost destitute Slocum was now faced with the problem of getting his wife and two children back to the United States. He chose to design and build a boat and sail them back. The boat he built was *Liberdade*, and the voyage to Washington, D.C. was perhaps the most remarkable voyage he ever made.

The boat had to be built with the scant materials available, using the few tools rescued from the *Aquidneck*, and at the least possible expense.

For the hull, he based the shape on his "recollections of the Cape Anne Dory." The resulting hull was 35 feet long with 7½ feet of beam. The draft was a little over 2 feet and there was no external ballast except for an iron band along the keel. The bottom was planked in very heavy ironwood, the planks being 1¼ inches thick and 10 inches wide. For the topside planking he used very light red cedar.



Liberdade 1888

The weight of the bottom planking contributed to the stability of *Liberdade*, but Slocum found it necessary to increase the stability more by lashing bundles of bamboo to each gunwale.

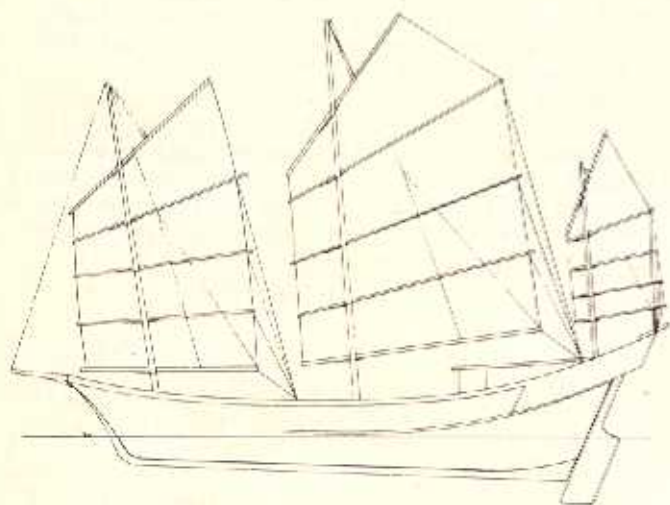
The cabin, such as it was, was formed by lashing a tarpaulin over a light bamboo framework. The hull was fastened largely with wood pegs and with copper nails cast from molten copper coins.

When Slocum came to design the rig, he used a photograph he had of a Chinese *sampan*. This rig, he stated, was "the most convenient boat rig in the whole world." He chose a three-masted rig. This helped to keep the masts short and the center of effort low, an important factor in such a narrow boat. Three sails also would make it easier to balance the boat to achieve some degree of self-steering. Most important of all, the rig required no specialized fittings.

The full-length battens were made from bamboo and the cotton sails were sewn on Hettie's sewing machine, saved from *Aquidneck*. After the sails were finished, the sewing machine was exchanged for an anchor and a cable was made by twisting vines growing in the jungle.

Just 18 weeks after the wreck of *Aquidneck*, *Liberdade* was ready for sea and launched on May 13, 1888. They spent little time on trials, but coasted north to Pernambuco before starting out for Barbados.

After a short stay in Barbados, the Slocums set off once more to sea. A swift passage to Puerto Rico was followed by a tempestuous ride up the Gulf Stream to South Carolina. The *Liberdade* delivered her crew safely, having covered almost 6,000 miles in 55 days at sea.



Chinese Junk circa 1600

Slocum copied the rig of the junk quite closely. After all, that rig had served the Chinese well for several thousand years. However, it was to be another 70 years before the rig was further adapted to yacht use.

The ever-inventive Col. H.G. "Blondie" Hasler had been experimenting in England with a number of rigs for his 25-foot Folkboat, *Jester*. He finally chose a Chinese lugsail set on a single unstayed mast. With this same rig, *Jester* went on to successfully complete all six singlehanded transatlantic races.

Hasler, together with his partner, Jock McLeod, further developed the rig on a number of boats including McLeod's own *Ron Glas*, which has crossed the Atlantic four times.

The rig has proved almost ideal for cruising, especially if shorthanded. The sails may be easily set, handed or reefed from a sheltered control position without ever going on deck. To reef the sail, it is lowered section by section until the sail is the required size. The unused portion of the sail and the battens lie

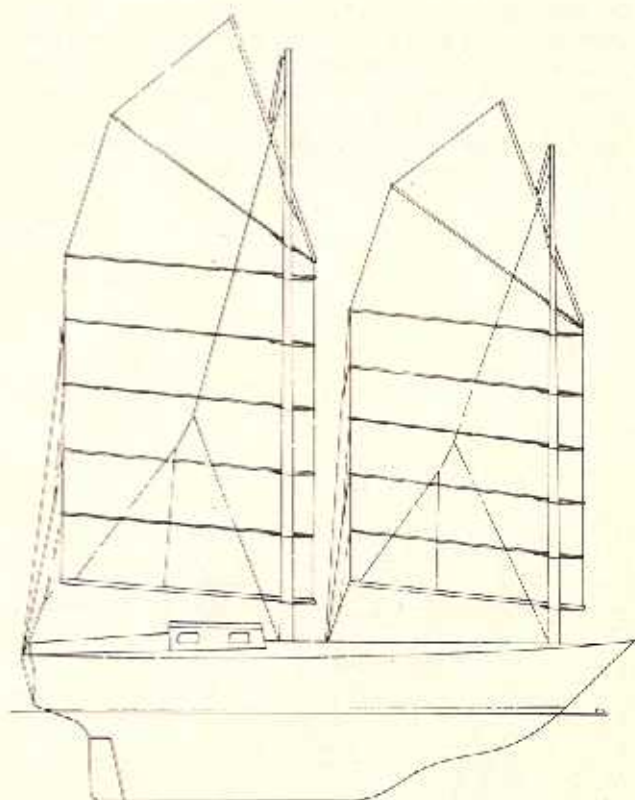
along the boom, held in place by the topping lifts and sheet.

As soon as the wind decreases the sail can be quickly and easily hoisted to its full size. The speed and ease of reefing and unreefing mean that as a squall approaches, full sail can be carried until the last minute when the wind actually increases. The moment the squall is past the sail can be easily hoisted at once; there is no need to worry about changing sails again in case the wind gets up once more. The whole process is so easy it can be done several times an hour without fatigue.

Obviously, there are some drawbacks. A junk-rigged boat will not eat up the miles to windward like the Bermuda-rigged ocean racer. However, the boat will not have to carry the bags and bags of headsails that these boats find necessary to inventory. This makes the junk-rigged boat effectively larger, as little or no sail stowage need to be built in. The only extra sail which may be carried is a lightweight ghoster for very calm conditions.

What the junk-rigged boat may lose in windward ability can often be made up by the ease and speed of reefing, as well as tacking. There are no flogging headsails as the boat comes through the wind; the fully battened sails merely blow quietly across. There are no sheets to tangle or reel in with expensive winches. For most boats, tacking only involves pushing the tiller over. When short tacking in a narrow channel in gusty conditions, the sails can quickly be reefed or unreefed without losing way to keep the boat sailing at her optimum speed.

In changeable conditions, a junk-rigged boat will often make a faster passage than a so-called conventional boat, because it is easier to keep the boat sailing at her best. At 2 a.m. with rain lashing down and the wind increasing, anybody about to go on watch would agree with Slocum. The junk rig surely is "the most convenient boat rig in the whole world."



Papilio Ruga

Following his own advice, John Campbell, with wife Lana, built *Papilio Ruga*, a 35-foot fiberglass junk-rigged schooner. This is John's third article for *Cruising World*.