few months ago I was discussing cruise planning for this series with Tom Cunliffe, who, in his new book Gaff Rig, makes the case for the gaffer, including the careful use of low-tech spars and fittings that can be repaired or replaced almost anywhere. I'm no shipwright, but I once carved a mast out of a tree – and it drove me 10,000 miles and more. One critical benefit is that, as you reef it, the centre of effort of a gaff sail doesn't move forward like its three-cornered equivalent. This helps a how-to-gaffer point up properly rather than falling away beam-on into an untenable compromise. Add the typically deep gaffer forefoot and heaving-to becomes the classic formula for gale survival with all hands turned in safely demanding payment for them. Owners are looking for something more personal' Freedom to be different Your yacht doesn't have to be powered by a run-of-the-mill Bermudian rig. Tom Cunliffe explores some alternatives BEYOND THE BERMUDIAN RIG}

For a century or more, gaff was the rig of choice for fishing smacks, pilot boats, revenue cutters and all those vernacular small craft that sailed without the big crews demanded by the alternative lug rig. When yachting got under way around 1850, there was no viable alternative for power, ease of handling and close-windedness. A huge library in word and picture tells us how well it functioned, and I'm pleased to advise that it still does. No modern-yacht sailor who's been overtaken by a classy gaffer in full race trim could possibly argue.

Recent technology has made life easier for the gaffer, including the careful use of winches and Spectra or Dynema rope. We've even seen carbon-fibre gaffs to keep down weight aft, but parts argue that lightness up there spoils a boat's motion and discourages the sail from coming down. I'd agree with them. Gaff is thriving and new boats are being built in big numbers – in GRP production runs as well as individually in wood, steel and composite. The lovely Old Gaffers' Association has over 2,000 members and many a jaunty cutter is currently voyaging the wide oceans.

At its best, gaff is downright handsome. It is also highly entertaining to sail, delivering its pearls only to those prepared to work for them. The satisfaction that rewards anyone who really gets a gaffer going is hard to calculate. Gaff is also the saltiest of rigs. From the smartest classic yacht to the hungiest world-girdler, it's a celebration of the ancient arts of the sailor, with more whooping and splosh to the ton than any other set-up.

Gaff's large, low-aspect-ratio sail area is ideal for driving heavy displacement hulls that are not particularly close-winded. Because the short rig confers wider shrouds, point loadings are minimised, so it's easy on the hull. Sheet loads are also reduced, doing away with the need for massive winches. The low, deep sails have a high stall tolerance, which means you can overshoot them without killing your boatspeed, easing the demands on crew. The benefit of conceding this to a gaffer demands levels of seamanship that not everyone is interested in acquiring.

A 30ft Cornish Pilot Cutter - a modern GRP gaffer - tows up the Beaulieu River. A 30ft Cornish Crabber Pilot Cutter, including the careful use of winches and Spectra or Dynema rope. We've even seen carbon-fibre gaffs to keep down weight aft, but parts argue that lightness up there spoils a boat's motion and discourages the sail from coming down. I'd agree with them. Gaff is thriving and new boats are being built in big numbers – in GRP production runs as well as individually in wood, steel and composite. The lovely Old Gaffers' Association has over 2,000 members and many a jaunty cutter is currently voyaging the wide oceans.

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**AERORIG**

This controversial rig operates via an unstayed, carbon-fibre mast with a single boom running right across it at gossoon level to form a sort of方可升降的桅杆. When the rig is sheeted fore and aft, one section of the boom extends aft as usual, the other runs towards the stemhead. There is no gooseneck. Instead, the whole rig, mast and all, rotates under the control of the mainsheet. This means that as the mainsail and all, rotates under the control of the gooseneck. Instead, the whole rig, mast runs towards the stemhead. There is no need to change course. On any point of sail, amazing light. Reefing is a breeze. No... with the Edwards, so sheet in and off you go again! An AeroRig will cost a lot more than a conventional sloop, but drowned in the trades, if I could afford it, and wasn’t a lifelong sufferer of gaff, I’d have no other rig.

**JUNK RIG**

When all the shouting is over, it must be said that junk rig satisfied the Chinese for millennia, not just for a few years while it was in fashion. The Western version came into the public eye in 1960, with Bandido Hasler’s 25ft Folkboat Jester, in the first singlehanded transatlantic race. Numerous cruising yachts followed, including such notables as Annie and Pete Hill and Badger. The rig enjoys a continuing popularity among a significant group of serious seafarers.

The junk rig uses full-length battens to shape and control the sails, which are semi-balanced, with a small proportion of their area forward of the unstayed mast. It generally appears in sloop or schooner form.

**ADVANTAGES**

Junk means low-stress yachting. It looks grow on you, and those lovely elliptical leeches work well, too. It’s probably the lowest-tech of all wind engines. It’s cheap to build and easy to repair at DIY level. Many junk rigs have been entirely home-built, including the sails. Loads are light because the sails are multi-sheeted from each batten. Chafe is not a serious problem as with an AeroRig, but it’s a lot better than gaff: reefing is child’s play, with the sail flaking into its lazyjacks like a window blind. The rig is not notably light because the sails are multi-sheeted and you can’t do a lot to increase this with lightweight kites because the junk’s mast is usually quite short. On the other hand, some would argue that you don’t really need a kite for ocean cruising, anyway.

**DRAWBACKS**

Many examples lack power when close-hauled, compared with a Bermudian sloop, although in design, a hull that can point, and attention to battens can offset this. Sail areas are often not great, and you can’t do a lot to increase this with lightweight kites because the junk’s mast is usually quite short. On the other hand, some would argue that you don’t really want a kite for ocean cruising, anyway, because the ever-present swell reduces its effectiveness.

**Junk rigs are cheap to build, easy to repair and loads are light**
The Freedom Rig was developed in the mid-1970s. Early boats featured a ‘cat ketch’ rig, more like two windsurfer rigs in tandem than anything else. The free-standing spars maintained a low centre of effort, while the vang-less, windsurfer-style booms were satisfyingly efficient. Downwind they winged out, one each side. The original Freedom 40 had a distinctive hull, well suited to the rig. Over a hundred were launched and she was soon followed by the UK-built Freedom 35. The concept was altered in 1987 with the Freedom 30 and her larger sisters. The original radical wishbone sails were replaced by a more conventional mainsail, but the unstayed carbon-fibre mast remained; often powered up by a self-tacking jib.

Other forms also flourished, such as Nonsuch yachts and Wyliecats. These are generously canvassed cat-rigged sloops (mast stepped right forward) which stick to the wishbone boom. The Nonsuch range are fine beamy craft, they are said to be well-balanced and are certainly striking to look at.

**ADVANTAGES**
The first Freedoms were very quick and easy to sail downwind, and their windward performance was adequate for cruising. Close-hauled performance improved further with boomed mainsails and a jib. All the boats can tack with no more effort than it takes to steer through the wind. I well recall watching an early one beat into the Tobago Keys. No winches grinding and rattling. Bliss!

Like all unstayed rigs, chafe isn’t an issue. Reefing is generally by conventional slab, and many Freedom-style yachts can be shortened down easily from the cockpit.

**DRAWBACKS**
So long as there are unstayed rigs, people will shout about them being unsafe, but I’m inclined to be convinced by one of the Freedom’s designers. When asked if a lack of rigging isn’t dangerous, he observed, ‘Orville and Wilbur Wright used wires. Boeing doesn’t.’

**CONCLUSION**
This article began and ended with quotes. At one extreme we have high technology, developed by a designer who points out that the cutting edge brings us ever-nearer to perfection. Not all new ideas work out in practice, but anyone who disagrees with the principles of progress deserves to be living in a cave without fire to warm his bones or a stone axe to facilitate topping up the meat-safe.

At the other end of the spectrum is our own reader, opting for a simple, old-fashioned rig just because he likes it. What better motivation can anyone have?

**NEXT MONTH:** Fog can come down quickly and leave you sightless at sea. Discover the fog tactics to keep you safe. April issue on sale 14 Feb