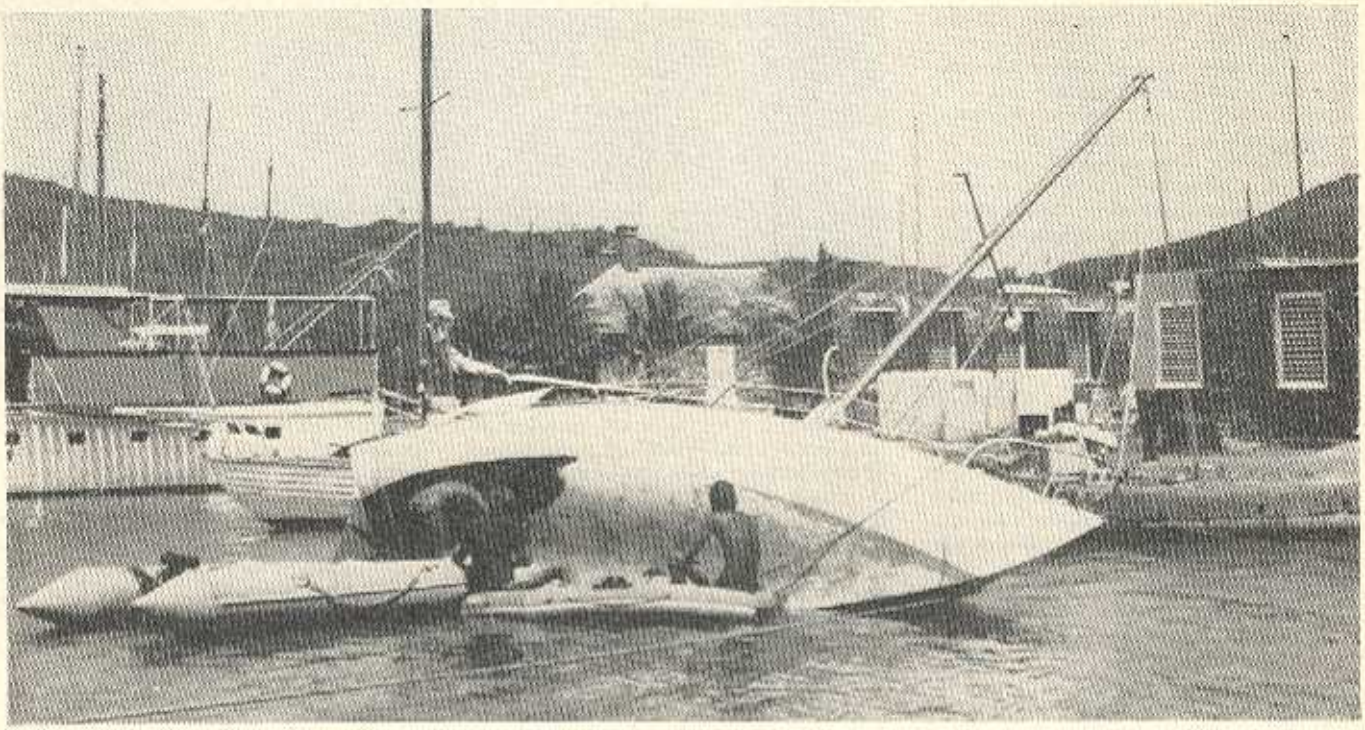


Careening-old and new

John Campbell describes how to clean or anti-foul a yacht when there are no slipping facilities

"His Majesty's Ship Blenheim. Process in preparing to heave down a 74 gun ship by Mr Wm Hill, Builder, His Majesty's Yard, Antigua.

Take down the quarter gallery to caulk the seams under the lining, which seams we in general find very open and would make a great quantity of water. Birth in the gallery doors, likewise two of the wardroom windows and the gunroom ports. Birth in the lower deck ports with three inch deal, upper wich two and a half inch, and the quarter deck under the poop with two inch.

Lay five strakes of three inch deal in the boat skids next to the gangway and build up a bulkhead under the breast beam of the poop to prevent the water from getting into the waist, and under the poop into the cabin.

Get in the outriggers and secure them with heel shores, spread shores and a spar on the upper sides of the heel of the outrigger, well lashed down to ring bolts to prevent them from lifting. Likewise fit shores between decks under the heel of every outrigger to prevent too much strain on the upper deck beams.

Cut away as much of the main and fore partners on all decks as will admit the mast to be bound well over to the weather side. Have a shore of fourteen inches to secure the heel of the mast, and two of twenty three inches for mast shores, well secured with one hundred and forty fathoms of four inch rope.

Scuttle the lower deck abreast of the main and fore hatch for the careening pumps."

Detailed instructions are then given to determine the weight of water which must be stored on the quarter deck and fore castle, and iron ballast midships, to decrease the stability of the ship, so that a 'Purchase equal to forty tons at the mast head will heave the ship down'. The ship was then heaved down by her masts until the keel was above water. The whole of the bottom could be cleaned or repaired, half at a time, without lifting the ship from the water. The process was much used in areas of little or no tide, where the ship could not be dried out on a beach, where there were no facilities to slip ships.

A similar method of careening can be used by yachts, to clean and anti-foul the bottom, where slipping facilities do not exist or cannot be afforded, and there is not sufficient tidal rise and fall to dry out on a beach. The process is similar to that employed by the old squareriggers, but luckily not so complicated.

The first essential is to unload from the boat anything that will be damaged when the boat is heeled over; do not forget to remove batteries, and ensure any fuel tanks will not overflow. As much weight as possible must be removed from the boat, especially anything stowed low down in her, so she will float as high as possible when she is on her side. This unloading is the most difficult and time consuming part of the whole operation.

When the boat has been unloaded, she must be positioned parallel to a quay and held off about threequarters of the height of the mast. The boat can best be held in this position by a bow and a stern line, and an anchor laid well off amidships. The cable should be passed under the keel and brought up on the side nearest the quay, and secured amidships. Using the anchor in this way will encourage the boat to heel over as it takes the strain. A large boat may require two anchors, in this case lay them off the bow and stern.

A purchase of 4:1 is adequate to pull down a 6-tonner; a larger boat will require a greater purchase. The strain on the mast can be considerably reduced if any internal ballast is secured on deck, or as the squareriggers did, full water carriers are 'stowed on the quarter deck and fore castle'.

When all is secure the boat can be pulled down. One person can easily pull down a 6-tonner using a tackle of 4:1. The upper block of the tackle should be secured to the mast at the height of the forestay, as this is usually the best stayed region of the mast. As the boat lays over care must be taken not to pull her far enough over to allow water to fill the boat through non-watertight openings, such as cockpit seat lockers, or the companionway. Care must also be taken to see that water cannot enter through such as the sink outlet.

A light displacement boat such as a plywood ketch will be able to be careened far enough for the entire keel to be out of the water. With such a boat the entire bottom can be cleaned and re-painted in the normal way, doing one side, then careening the other way to do the other side.

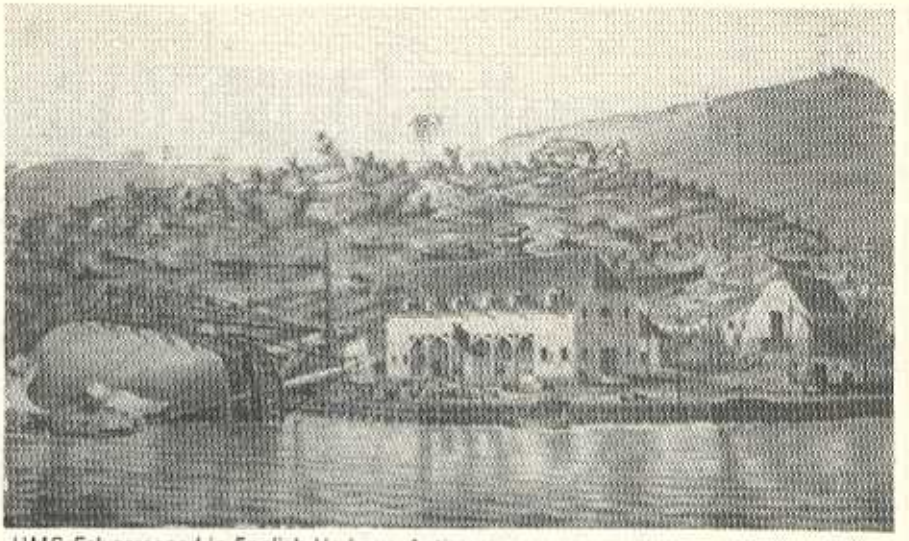
Boats with a higher ballast ratio, such as the Contessa shown, with a 55 per cent ratio, will not be able to raise the keel out of the water. The Contessa has been pulled over until the water almost reaches the cockpit. If it were not for the non-watertight seat lockers she could have been hauled further. At this angle most of the hull dries, leaving about two feet of keel in the water.

The entire side of the boat is scrubbed off, above and below water, and the area above water is antifouled in the normal way. The area below water can be painted with 'International Antifouling for Underwater Application'. This paint is quite difficult to apply, but with perseverance it is entirely possible. It is not really feasible to paint the entire bottom of a boat with this paint while diving, but working from a dinghy in a couple of feet of water acceptable results can be achieved. The funny comments which flow at the sight of somebody painting underwater make the whole evolution worth while. Once the paint can be persuaded to stick, it appears to be very efficient antifouling.

Wooden boats will tend to leak through the topsides which are rarely immersed, so they must be pumped out regularly, and anything which may be harmed by water must be removed from lockers which will get wet. The clinker built Stella had to be pumped every two hours or so. A GRP boat will not, of course, suffer in this respect, and when the Contessa was careened only heavy items had to be removed; clothes, etc, could be left in their lockers.

Almost any boat should be capable of being careened, but obviously the greater the beam and draught, and the higher the ballast ratio then the greater the strain on the boat will be. The boats shown did not appear to suffer in any way, and it is quite surprising what little force is needed to pull most boats over.

Finally, be prepared for a host of silly questions. One day, in English Harbour, Antigua, when two boats were careened together, we were being plagued by people asking why the boats in this particular corner had fallen over. Our stock reply became 'because there is a local gravitational anomaly'. It sounded so rational that few people pursued the matter further, and we were able to continue painting underwater in peace. <>



HMS *Esk* careened in English Harbour, Antigua
Photograph and instructions to heave down HMS *Blenheim* reproduced by courtesy of the Supervisor, Nelsons Dockyard, English Harbour, Antigua

The Contessa could not be hauled down further as the cockpit would fill

Stella class careened. Because she is clinker built her topsides leaked and she needed regular pumping