



The SHOCK of the OLD

Part 24: The Lug Rig

Having offered refinements to the individual elements of traditional rigs Moray MacPhail now begins putting the parts together.

We start with the lug rig. Like me you may have thought that the lug rig is either the province of some hairy looking traditional workboat at the large end of the range or a tiny tan sail on a tender. It was quite an eye-opener for me then when a Michael Storer Goat Island Skiff – right – appeared at the 2012 Harwich Harbour English Raid. She was simple and fast on all points. And as if to rub it in, Alex Haig's Deben Lugger – above – was overall winner on handicap.

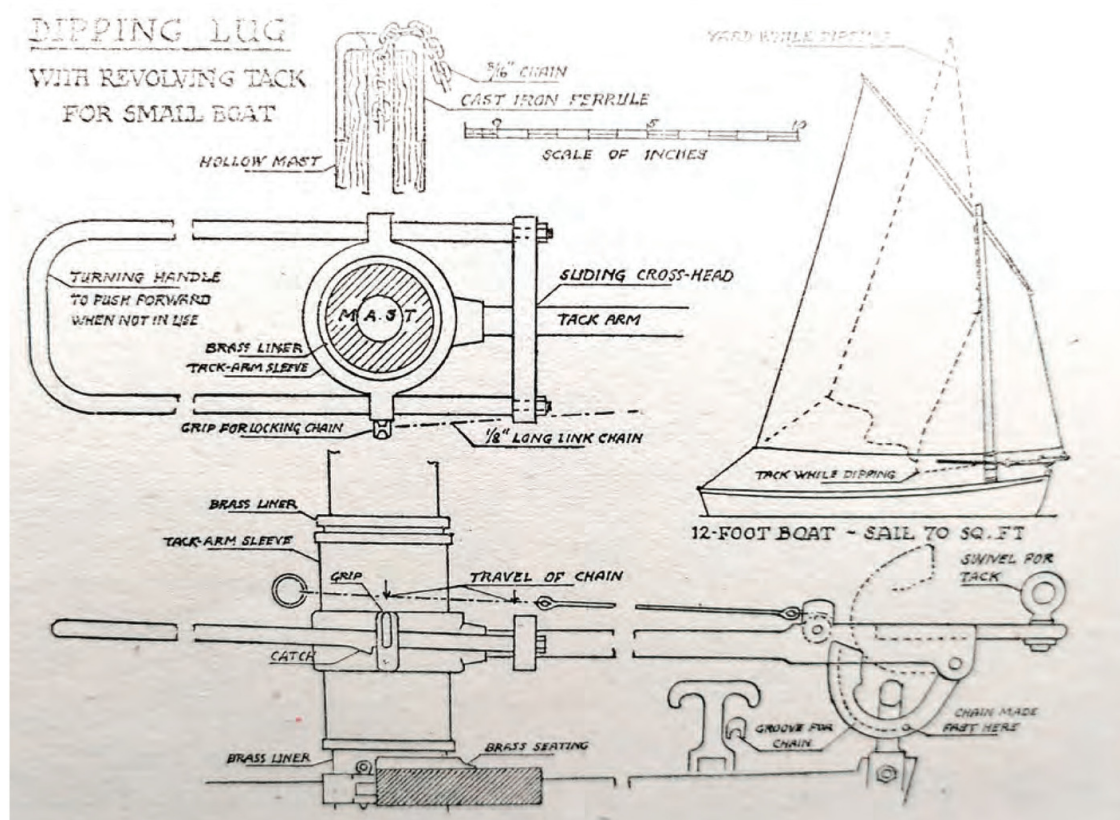
Obviously something is going on here, so a good time for a short



review of the types of lug rig. My guide is E F Knight's book *Sailing*, first published in 1889. He writes:

The Dipping Lug... .

.. is a powerful sail very well adapted for sea work, and a favourite with fishermen and other professional sailors, but it cannot be recommended to the amateur; for at every tack the sail has to be lowered and passed round to the other side of the mast. This necessitates plenty of sea room, and would be an awkward operation to undertake while turning up a narrow and crowded channel.



Facing top: The Deben Lugger developed and sailed here by Alex Haig uses two balanced lugs – Anglia Yacht Brokerage Below: Michael Storer's Goat Island Skiff melds traditional and modern – Joost Engelen Above: Conor O'Brien's 1945 book Yacht Gear and Gadgets included this ingenious ironmongery aimed at making the dipping lug easier for the leisure sailor....Hope springs eternal! – Author's collection.

Occasionally there is a new build pleasure craft which uses a dipping lug, but you can see why fishing boats were early and enthusiastic adopters of engines, once they had overcome fears that the noise would scare the fish away. Attempts to make life easier for the leisure sailor include Conor O'Brien's gadget shown above. I'm not surprised that I've never seen one of these in real life.

If you want to know more about this sort of rig and its development, see Michael Smylie's book *Traditional Fishing Boats of Britain and Ireland* Back to Mr Knight.....

The Standing Lug...

....though not so powerful a sail as the dipping lug, is far more convenient; as the sail has not to be lowered in

tacking. The tack, instead of being carried forward, is brought down to the mast, where it is hooked on to an iron hook if the sail be a small one, and if the sail be a large one it is fitted with a tackle, so that the tack can be bowsed down after the sail is hoisted. The yard is swung at about one-third of its length, where it has a stop to pass over the hook on the traveller – an iron ring on the mast to which the end of the halyard is attached to prevent the sail blowing away from the mast. To ensure a lug sail will stand well, the peak should be cut high."

So the main feature of this sail is that the tack is held at the mast, whether the sail is boomless – as in the Drascombe Lugger – or if a boom is fitted as in the International 12 – shown in action over the page. As

John Leather said of it: "the standing lugsail rig reached near perfection for windward sailing in English racing dinghies between 1890-1930", exemplified by the International 12, designed in 1913 by George Cockshott in the UK and now keenly raced in the Netherlands and across Europe.

With a boomless sail the sheeting position needs to be well aft to keep some sort of shape in the sail when going to windward, hence the frequent use of a boomkin for the mizzen. A potential problem with a boomless main comes downwind because the yard cannot be controlled by the sheet. Instead it swings about, sometimes ending up the other side to the clew of the sail. Rolling downwind is bad enough without a twisted sail adding to the joy.



Above left: *The International 12 uses a boomed standing lug, here being driven quite hard – Good Wood Boat Co.* Above right: *If the yard of a standing lug is attached to the mast by jaws it's a gunter rig, like this Mirror dinghy used as a trainer at Restranguet SC – Martin Egan.*
 Below: *Lymington River Scows have developed their lug rig over decades to provide very close racing – photo Coolhat Photography.* Facing left: *Nigel Irens was one of the first designers to update the lug rig for larger craft. Here is his elegant and fast 30' (9m) Roxane – Kathy Mansfield.* Facing right: *Michael Storer was inspired by the late 19th century American canoeists to design his Beth canoe – Jon Armstrong.*

The need for a tight luff remains, so if a boom is fitted, jaws rather than a gooseneck are generally preferred to allow the luff to be bowsed down – to recycle that traditional phrase!

Unless jaws are also used on the yard to make a gunter lug – as in the Drascombe or Mirror dinghy– then it

is usual for the end of the yard to be tripped on tacking to end up on the leeward side of the mast; a good deal easier than tacking the dipping lug!

As well as designs which hark back to or are traditional craft, this rig has attracted the attention of current designers, perhaps most notably Nigel Irens with his Roxane and Romilly

designs which set boomless standing lugs on both fore and mizzen masts. If a boom is fitted which runs forward of the mast, then you have a balanced lug. Over to Mr Knight again...

The Balance Lug

The favourite sail for small centre-board craft in England is undoubtedly the balance lug. Most of the racing boats on the Upper Thames are fitted with this sail; some have jibs, others jibs and mizzens, besides the mainsail; but we will confine ourselves to describing the single-sail centreboard dinghy, which little craft is perhaps unrivalled for the purpose of single-handed sailing on a river.

The sail is hoisted on a yard similar to that of a standing lug, but the





foot of the sail is laced to a boom and extends some distance in front of the mast. One end of the tack is fastened to the boom, where it crosses the mast, and the other end of it is secured to the mast.

The tack is a most important rope in a balance-lug boat, for after the sail has been hoisted with the halyard and it is required to give that last haul on the sail which brings it to its proper tautness,.....it is with this tackle, not with the halyard, that one sets it up.

A well-cut balance lug properly hoisted should be nearly as flat as a board. The fact of the tack being some way down the boom prevents the pressure of the wind from lifting the after-end of the boom and so forming a belly in the sail, as is the case with the ordinary fore-and-aft sail.

Almost all E F Knight said back then is correct but it would be

a mistake to think not much has happened since 1890. A number of people have been on the case in the meantime. To name a few, the Lymington Scows have developed their lugsails over the last 100 years; I was vexed to be held at bay by a Scow during the 2010 Solent Raid.

Plus you can see from Iain Oughtred's Catalogue that he was firmly of the view that "simpler traditional rigs can offer satisfactory performance with a lot less effort not to mention cost and complication".

Perhaps pre-eminent in this area is Michael Storer, who has been developing balanced lug rigs for decades now. He is the designer of the impressive Goat Island Skiff and this is from his notes on Beth, his modern take on the sailing canoes of the late 19th century:

"Old fashioned rigs – gaff, lug and

sprit – are pleasant to the eye, but in my experience they sailed like dogs. Yawl rig also had a doggy reputation; 'one mast is fast' had been drummed into me. But what if a traditional rig was set up using modern sail controls and fitted to a hull with high speed potential? Beth turns out an unusual mix of the old and new – the performance of modern boats but the manners of old boats!"

Yet again it turns out that the use of modern materials can do much to bring apparently old-fashioned rigs back into the modern world. So in re-rigging my canoe yawl, I have leant heavily on Michael Storer's ideas and efforts, and so far it is turning out pretty well.

We'll start next time by looking at the spars for a balanced lug rig.
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