

# LIVERPOOL SAILING CLUB

## NEWSLETTER

### AUTUMN 2019

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## Hove-To

Autumn 2019

Once again as I write this the nights are drawing in, and for most of us the sailing season is drawing to a close. And I must apologise that although *Tarka II* has indeed been actively sailed this summer she has not this year wet her bottom at the club. I had hoped to have a brief autumn cruise, but unexpected engine problems have ruled that out.

Coming up we have what I have always understood is the prime fishing season on the Mersey, and also some of the most popular social events of the year - the Laying-Up Dinner and the Christmas Lunch, plus the Festive Sing-along.

And please don't forget the AGM, provisionally on Sunday November 24<sup>th</sup>. Although the formal part of the occasion is very specifically a business meeting it is nonetheless a vitally important one; this is the occasion when you, the Members, set the level of next year's subscriptions, when you elect the Officers and Committee for the coming year, and when you get the opportunity to hear Reports on the year just ending, and to ask the Management Team about any matters which are of concern to you. There may also be other matters discussed, provided they are on the Agenda of the Meeting; but since I have now stepped down from Committee I genuinely don't know whether there will or will not be any

such extra items.

This issue is again slightly thin on what we might call parochial news, of activities of our own members. In part that is because Mike has already done a sterling job of reporting that in his mini-Newsletters, approximately monthly, and I have no wish to repeat old news. In part it is because your Editor has been somewhat out of contact this year, for a variety of reasons (including flying the flag elsewhere, as well as professional commitments), for which he apologises. And in part it is also because a planned article by one of our members has unavoidably had to be postponed to (we hope) the next issue, initially because of illness, and now that the member concerned has recovered and is back at work he is away on business. These things happen, and it gives us something to look forward to in the next issue.

My own summer cruise was enjoyable, but truncated at both ends, partly by professional commitments both before and after the planned cruise. And then the start was further delayed when I found that I perforce had to pay for some neglect of maintenance, and instead of being able to just give the mast a quick coat of varnish I had to strip it right back to bare wood and also repair a very major split, before then sanding and varnishing.

At the other end, an engine failure - which as I write is still under investigation by the engineers - led to a lifeboat tow home. So not as good or extensive a cruise as I would normally hope.

For the dinghy sailors and kayakers there is always the possibility of some good days on the water in the autumn, and even in the winter. I have many times had good day-sails, and occasionally even longer cruises, in October, and also good day-sails both in November and in February when we have been fortunate enough to have nice days (nice for the time of year, that is). So don't give up just yet!

All that remains is for me to wish you all the best for the festive season coming.



*Oliver*

## FORTHCOMING CLUB DINING EVENTS

There are two very popular and usually highly enjoyable events coming up:

**Laying Up Dinner**      Saturday November 16<sup>th</sup>, and

**Christmas Lunch**      Sunday December 8<sup>th</sup>

These are always enjoyable and convivial occasions, and highly recommended. Watch out for the flyers nearer the time, and book in good time to be sure of a place.

However your President apologises that, for what he thinks may be the first time ever, he won't be able to get to the Christmas Lunch; wearing his Organist hat he will be on duty elsewhere, with the first of the Christmas services.

## A DATE FOR YOUR DIARY

A very broad hint was dropped in the last issue as to who our next outside speaker would be, so it will come as no surprise that we have indeed booked the legendary **Tom Cunliffe**, who will be giving a talk at the club on **March 20<sup>th</sup>** next year.

He is an immensely experienced world-girdling cruising yachtsman, an erstwhile Yachmaster Instructor Examiner, internationally renowned expert witness, master mariner (I think), and writer and broadcaster. But perhaps above all he is a superbly entertaining raconteur, who can be relied upon to entertain his audience, and often to greatly amuse them, as well as to educate and inform them.

The title of the talk is "*Ice with Everything - to America with the Norsemen*". To quote from his website, "The early 1980s saw me setting off in a 1911 sailing pilot boat, with my wife and 4 year-old daughter as part of the crew, to follow the old Viking route from Norway to America. I only partly succeeded, and it was to be many years before another chance came my way when a mate offered me a berth to Greenland in a boat that he'd bought for £14,000 on eBay. In this talk I weave the modern day and ancient expeditions into a rollicking tale you really won't want to miss."

Your Editor can warmly endorse that description, having heard and enjoyed a modified version of this talk at the RYA Northeast Cruising Conference a few years ago, and having also read and enjoyed Tom's book about the same pilot cutter voyage, *Topsail & Battleaxe*.





As with all our previous guest speakers, we will be inviting clubs from across the region, and for this one we expect to be sold out, so if you wish to come you are recommended to get your booking in early. Bookings will open for LSC members on 1<sup>st</sup> January, and for those outside the club a fortnight later. Ticket price will be £20, to include a bangers & mash meal before the talk.

## SIR DAVID ATTENBOROUGH

(Very nearly named something else ...)

Capt David Bray, who you will recall gave us a very interesting talk earlier in the year about his time in the Antarctic as Navigating Officer of the *RRS John Briscoe*, attended the naming ceremony at Cammel Lairds in September, and has sent us these photos.











## NOT WHAT WAS INTENDED!

Your Editor regrets to have to report that his summer cruise, which was already shorter than usual because of professional commitments at both ends - ended prematurely when a seized outboard motor two hours into an eight-hour passage resulted in a lifeboat tow back to Tenby.

The motor was brand new just two years ago, and has been regularly serviced at the recommended intervals by the dealer. I was on passage back to Milford Haven, where I had left car and trailer, intending to (eventually) haul out at Lawrenny.

Conditions were light head wind, against a spring tide, with tide races in places, giving a strong fair tide for the passage but for much of the time a very lumpy head sea. With the wind on the nose as well as a lumpy sea I had decided at outset to motor rather than sail. When the engine stopped unexpectedly I of course tried to restart it, at which point I found it had seized solid. So the immediate response was then to raise full plain sail, but I soon found that with such light winds and a lumpy head sea the best speed I could make through the water was about 1 knot, which was not viable on a passage of that length.

So I called up the Coastguard on the VHF to alert them to the situation. I made it absolutely clear that I was not in distress, but that I would welcome their advice, and I will admit to being relieved when they said that they would call out the lifeboat. I suppose that one factor in their decision-making may have been that although the situation was not distress, there was the potential for it to later escalate into distress; and also that in my then geographical position it was a shorter passage for the lifeboat than might potentially be needed later if the Coastguard delayed, and the situation then escalated.

The tow was "interesting": typical speed 7 knots through the water, occasionally touching 8, and this in a boat little more than 16 feet on the waterline. Tiller loads were very high, and at times I was struggling to keep her lined up correctly on the tow line; indeed I even radioed the lifeboat to request slightly less speed because I was struggling. But on reflection I suppose they are past masters at judging to a nicety what is the maximum speed they can get away with towing a casualty without causing serious problems.

By the time we got back into Tenby Roads, where they dropped me to anchor myself, the engine had freed off and would now turn over. I did a quick check on the oil level, which was full, so I then restarted it; the next quick check was on the cooling water tell-tale, which was also OK, with a steady stream of water emerging. So we were back in business, at least for the purposes of motoring into harbour, but I was not willing to trust the boat to a 30-odd-mile passage round the coast with a dodgy engine, so instead I took a taxi ride across the peninsula back to Lawrenny to collect car and trailer, and then hauled out in Tenby and recovered her by road.

At that stage my best guess at the cause was that a floating plastic bag might have obstructed the cooling water intake.

First thing when I got home was to take the engine back to Liverpool Powerboats. Ian's first action was to take off the cover, and he noted that there was no blistering of the paintwork, so it had not been catastrophic overheating, whatever else it may have been. The next report, after checking it over and also doing a full service, was that there was no damage to the impeller, so my initial suspicion of a blocked cooling water intake seems to be incorrect.

Then a few days later the report was that compression tests were giving inconsistent results. First test gave 90 (presumably psi), second gave 35, and subsequent tests were all over the place. Putting oil into the cylinder made no difference, so the problem does not appear to be rings

So at the time of writing they are having to dismantle it to check the valves, and see what else may possibly be amiss, in order find the cause of the trouble. Since the engine is only two years old, has been dealer-serviced in accordance with recommendations, and we seem to have eliminated the possibility of blocked cooling intake, I am hoping that this will be a warranty repair!

There is however a potential bonus, a silver lining to the cloud. Ever since purchase, it has been a right pig to start when on my boat, and it has been back to the dealer several times, but the reason has (until now) remained a mystery. It always starts immediately and without problem when it is in the test tank; I have seen both Ian and John start it there, and indeed I have started it myself there; but put it on my boat and it is a different story. However if there is now found to be an internal problem, there is at least the possibility that this may also have been at the root of the starting difficulties.

## PRODUCT REVIEW -

### HELYAR HEADSAIL REEFING SYSTEM

This system is specifically designed for dinghies and small cruising boats, rather than larger yachts, and several boats in the club both currently and over the past 15 or so years use it (or have used it). That includes at least one of the club Wayfarers, plus all my own boats of the last 15 years with the exception of *Snowgoose*.

That exception is only because *Snowgoose* is a seriously early vintage GP14, from the very first year of the class (1951), for which such a rig would be historically incorrect. If one is going to make a point of owning a vintage boat it rather defeats the object to then modernise her, and historical authenticity becomes of primary importance - even to the extent of having a suit of cotton sails, albeit that they are kept for fair weather conditions only.

For those sailing members who are not familiar with the Helyar headsail reefing system, it is worth reviewing.

The ability to reduce sail area when the wind rises, and to do so while actually at sea (because that may well be when the need arises), easily and reliably and safely, is a fundamental requirement of good seamanship, and of a properly well found boat. This is equally true for a tall ship, or a (historic) sailing fishing boat, or a yacht, or a dinghy. While reefing the main may be the more important in a dinghy, reefing the genoa is nonetheless a very valuable part of the overall reefing system, for several reasons:

- Pulling in a reef in a roller-reefing headsail is so quick and easy that it is a sensible first step when reefing becomes necessary; and it may then be sufficient on its own.
- Even when the main is reefed, a full genoa can still seriously over-press a dinghy; better to reef it.
- When reefing is necessary the helm balances best when the reefing is distributed between both sails, in approximate balance. So when reefing the main, also reef the genoa.
- In less severe winds, when coming ashore onto our concrete slipway in the prevailing lee shore conditions, an excellent approach tactic is to drop the main well offshore, and then sail in under just the genoa, using the reefing line as a “throttle” to control the speed so that by the moment you arrive over the concrete you are almost stationary over the ground.
- Easily reefable sails have an enormous advantage over simply using smaller sails, in that when the wind falls lighter you have the benefit of the full area, and you may actually need that full area in order to beat a foul tide.

The basic requirement for a headsail furling system is a reefing drum at the tack (the bottom corner of the sail) and a swivel at the head (the top corner). However this on its own is not a satisfactory reefing system, because the luff wire (or in some cases luff tape) is not torsionally rigid, so if used for reefing there is nothing to prevent the head of the sail unrolling. If that happens it suddenly adds unwanted sail area in the worst possible place, aloft, where it has the maximum heeling moment; it also gives a truly dreadful shape to the sail (which is therefore inefficient), and it risks permanently damaging the sail by stretching it unevenly. Although there may be enough torsional rigidity to just get away with it when wailing well off the wind, these problems are very likely to arise when close-hauled.

Systems which are furlers only are therefore “all or nothing” systems; excellent for furling, but that is all they will do properly.

The solution is to use a reefing spar, which has sufficient torsional rigidity to ensure that when reefed the whole of the luff remains rolled to the same extent throughout its length, i.e. part of the sail furled and part deployed.

Many yachts use an aluminium luff spar to provide the necessary torsional rigidity, with the forestay running up the centre line inside the spar. However that is often inconvenient for a dinghy, not least because most dinghy owners will want to lower their sails completely at the end of the day’s sailing, when putting the boat to bed until next time; a rigid spar which is perhaps as long as the boat can be an awkward thing both to raise and lower and to stow aboard, and even more so if that spar permanently encloses the forestay. It also makes it very much more difficult to adjust the rig tension for different conditions, and in particular to do so while sailing, in the way that has become standard practice both on modern racing dinghies and also on those cruising rigs which are derived from the racing rigs.





The Helyar system may not be unique, but I am fairly sure it was the first one - and still the best known one - to address these issues by using a flexible luff spar, which is entirely separate from the forestay. So flexible, indeed, that when taken off the boat, with the fully furled sail stowed on it, it can then be bent into either a wide U-shap or even a circle for convenience of stowage.

There are other manufacturers offering headsail reefing for dinghies, including the Bartels system (which I believe uses a rigid spar), and Aero Luff Spars which also uses a flexible spar, in this case carbon fibre, which is stated to be flexible enough to be bent into a wide U-shape. However these systems are not so well known, although they are respected names, and this reviewer has no personal experience of them; this review is therefore specifically of the Helyar system, and it makes no attempt to “compare and contrast” the other two systems.

The Helyar system spar itself is a stiff but bendable plastic tube, of high torsional rigidity; I strongly suspect that it is black Alkathene water pipe, and at any rate it looks very like that. However the pipe is just the starting point for the system, and there is some engineering then done on it. To my mind, a competent engineer with access to the right workshop facilities is fully capable of making his own system from alkathene water pipe; but to do so commercially would probably be infringing Rob Helyar’s well-deserved patent, and to make just a one-off for one’s own use would entail a significant amount of hassle, including a degree of development work. Personally, I think Rob’s prices are reasonable, so I am content to buy mine ready-made, with all the development work done.

The system is available in two versions:

- Mark 1 is designed to work with an existing conventional genoa. The luff spar has a longitudinal slit along its full length, and it is then slid over the sailcloth of the luff, trapping the luff wire (not the forestay) inside the tube.
- Mark 2 is designed to work with a specially modified genoa. Here there is no slit along the length of the tube, and the luff wire is entirely separate from the sail. The luff wire is passed longitudinally through the spar before being spliced to the correct length, and then the assembled flexible spar and luff wire is then passed through a specially made luff pocket on the sail.

The Mark 2 is a much neater system, it has better torsional rigidity, and it also arguably gives slightly smoother airflow over the sail when fully deployed; it would always therefore be the recommended option if a new sail is being bought at the same time. However if retro-fitting to an existing sail the Mark 1 version becomes the cheaper and simpler option, and in my experience it works perfectly well. But a good sailmaker can always of course modify an existing sail to accept the Mark 2 system; and in particular Rob Helyar has developed a good relationship with Jeckells, who are now very familiar with this system.



I fitted my first Helyar system, the Mark 1, to *Strait Laced*, my then GP14, in July 2005; that was before the Mark 2 had been developed. Then when I had *A Capella* built (delivered July 2006), for the first year I conserved my funds by “borrowing” the sails off *Strait Laced*. Between the two boats I used this Helyar rig very extensively, and found it absolutely excellent.

The website does mention that when using the Mark 1 system in very gusty conditions, if not enough genoa reef has been pulled in the head of the sail can unroll by a couple of turns, but that the solution is simply to pull in a little more reef; they also state that the Mark 2 system has more rotational rigidity, and that this issue does not then arise. That makes sense, but personally I have never found the issue arise with either system; maybe I always reefed sufficiently anyway when I had the Mark 1 system!

By the time I came to buy new sails for *A Capella* the first generation of the Mark 2 system was available, and indeed Rob and I had tried out a prototype on the boat on Windermere before the system was actually released for sale. So that is what I bought, in 2007; and twelve years later it is still on the boat, and still functioning perfectly. Certainly I used it extensively for around ten years before I passed the boat on to my godson, including in occasional conditions which were well outside anyone’s comfort zone, and with just a very few isolated exceptions I never had the slightest problems with it. The most extreme test came in 2009, when I was running the GP14 National Cruising Week, and the fleet was caught out in an unforecast force 7-8 (independently verified the following day by Moelfre Lifeboat Station) off a major Anglesey headland.

The one single-hander capsized and inverted, and I stood by him under reefed genoa only, pending the arrival of the lifeboat. Then, once relieved by the lifeboat, we resumed our passage homeward, safely handling the conditions, and successfully making against the tide.

I was sufficiently impressed with this system to have recommended it to numerous other dinghy sailors, including this club for at least the first of the training Wayfarers to have full reefing capability, and all the reports I have had back have been full of praise for the system.

Then when the time came to buy a new staysail for *Tarka II*, and I wanted a furling system, this was the obvious system to choose even though I did not need an actual reefing facility. A pure furler would have been perfectly adequate, but there were certain other issues to do with torsional rigidity in the particular context of my slightly unusual rig, and going for the Helyar system was an easy way to solve them. When that system arrived I found that the Mk 2 system had been further refined from the (already excellent) system on *A Capella*, and it is now an even more fully engineered system, with nicely engineered fittings at top and bottom.



I mentioned two very occasional problems on *A Capella*. In fact neither of them relate to the Helyar flexible luff spar, but to the ancillary components at top and bottom, and they are potentially issues with any such system. The first to appear, within twelve months, was that because of the very high rig tension on the modern GP14 rig the top swivel was not up to withstanding that much load; so it failed to rotate, with the result that as the sail was reefed or furled it started to unwind the wire halliard. The solution was easy; a new halliard (obviously), and a change to a Harken double ball race top swivel. That effected a complete cure. So the lesson is that if the rig is tensioned by a muscle box or a powerful cascade tackle the top swivel needs to be designed for that load; the Harken double ball race one is an example of one which is, and which works well.



That does however have one knock-on implication. On most dinghies, and certainly including the GP14 and the Wayfarer, the forestay is so close to the genoa luff that some form of spacer is needed to keep the forestay off the sail and out of the roll near the head of the sail. The RWO and Sea-Sure top swivels offer forestay guides to keep the two apart, but the Harken one does not, so some sort of spacer needs to be devised; but that is not desperately difficult, and there are at least three alternative ways of doing it.

The second issue is that, just twice in ten years of my ownership, the reefing line came off the drum and jammed. As it happens, both occasions were at this club. That can happen with any reefing drum, and it seems to be ultimately a case of operator error; the solution is never to just let the line fly when unrolling the sail, but pay it out progressively, keeping just light tension on it all the time, and then cleat it off once the sail is fully deployed. You can pay it out as fast as you like provided at least a little tension is maintained at all times.

To my chagrin, that instruction appears on the website! (Although I flatter myself that this instruction may have appeared only since I reported the issue, and the solution.)

My overall assessment: a first class and very reliable piece of kit, and money well spent. Indeed to quote from an email on another topic received from a dinghy sailor only a few days before this was written, "BTW your recommendation of Rob Helyar's flexible luff spar for roller-reefable headsails was spot-on: money well spent! Many thanks for that."

And to put (more of) my money where my mouth is, not only do I now have a Helyar system on the staysail of *Tarka II*, but I am also now planning on installing a second Helyar system for her yankee jib, to replace the existing elderly (and occasionally now troublesome) Holt Mini-Reef system.

For some years now the Helyar system has been a standard option on new Wayfarers from Hartleys, and also on Cornish Shrimpers.

<http://www.flexible-reefing-spars.co.uk>

Finally, a reefing system for the genoa is only one aspect of a properly comprehensive seamanlike reefing system for the boat; one also needs a means of reefing the mainsail. To my mind, although I grew up with roller reefing, as did almost all dinghy sailors in the fifties and sixties, because this was standard equipment on virtually all dinghies, the way to go nowadays is a modern slab/jiffy reefing system. The reefing lines need to be rove ever time the sail is hoisted, and the system needs to be set up in such a way that one can pull a reef down quickly and efficiently at a moment's notice, with the sail setting absolutely flat. Describing how to set it up, and how to use it, could be an article in itself, but in the meantime do feel free to ask if you need guidance.

Oliver

## COLREGS

In the previous two editions we focussed on the steering and sailing rules between vessels in sight of each other in the ordinary course of navigation, and we mentioned in passing that there are some special situations where additional special rules apply. These can be largely summarised by four abbreviations plus one phrase; RAM, NUC, CD, TSSs, and Narrow Channels, and wherever any of these apply to another vessel we must give way and keep well clear; the formal wording is “shall keep out of the way of ...”.

First, though, a mention that the rules discussed previously apply only to vessels **in sight of each other**; they do not apply in fog! If two vessels cannot see each other they have no way of assessing the situation in terms of the rules discussed previously, and a different regime must then apply. If you are navigating in fog, whether by choice or otherwise, you need a thorough knowledge of Rule 19, which we may possibly discuss in a future edition. For most small craft in fog, where possible the safest technique may well be to head for the shallows, where ships cannot go; then consider whether to anchor there.

So, these special cases ...

**RAM;** this refers to a vessel **Restricted in her Ability to Manoeuvre**. By definition, she will be unable to take the normal avoiding action, and other vessels therefore have to keep clear of her.

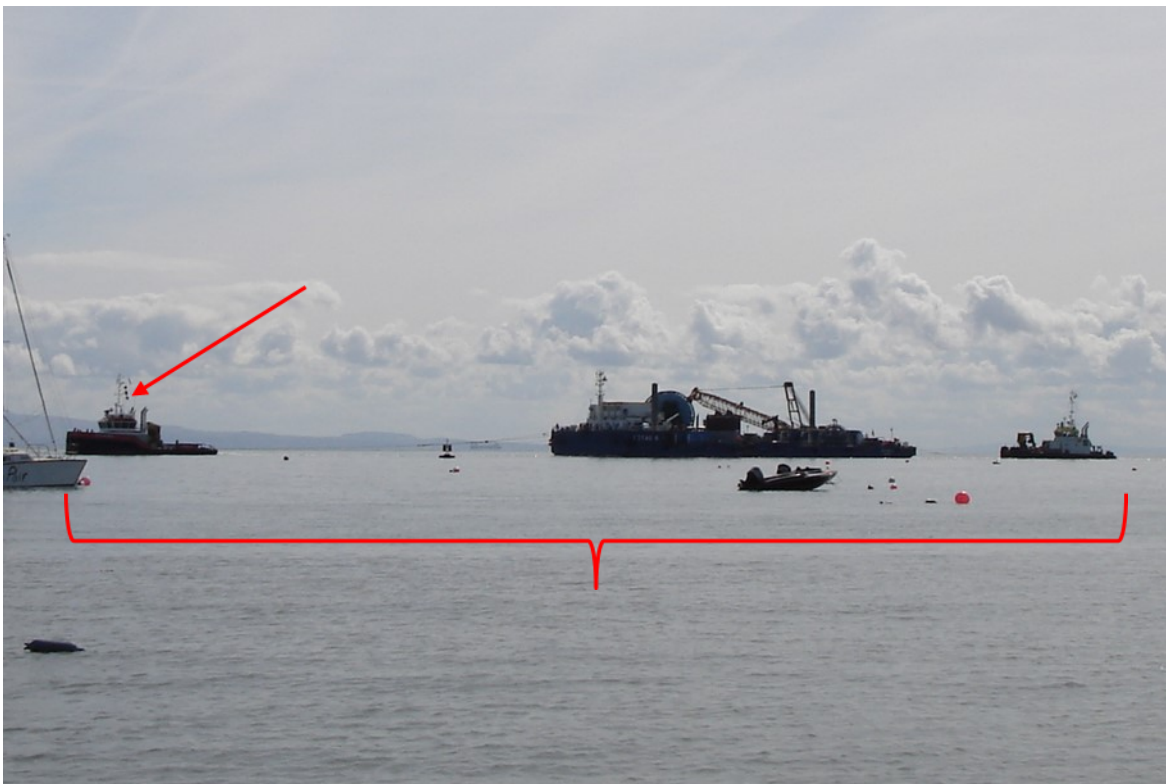
The term *vessel restricted in her ability to manoeuvre* means that because of the nature of her work the vessel has limited ability to manoeuvre as required by the Rules and is therefore unable to keep out of the way of another vessel. Examples include, but are not restricted to:

- A vessel engaged in laying or servicing or picking up a navigation mark, submarine cable, or pipeline. Although not listed in the Rule, it might well also apply to a boat laying or lifting a mooring, and it surely applies to Rob’s boat *Margarita* when on a falling tide she is drying out onto her (moored) trailer prior to being recovered ashore.
- A vessel engaged in dredging, surveying or underwater operations. I suppose that *Margarita*, in the example above, might also be covered under this exemplar, as a case of underwater operations.
- A vessel engaged in “Replenishment at sea”, or in transferring persons, provisions or cargo whilst underway.
- A vessel engaged in launching or recovery of aircraft.
- A vessel engaged in towing, but **only if** this severely restricts the ability of tug and tow to deviate from their course.

Such a vessel indicates her status by means of prescribed day shapes, and at night by prescribed lights.

At night she displays three lights in a vertical line; red, white, red.

By day she displays ball – diamond – ball, in a vertical line; that is fine in theory, but note that in practice the shapes may be dwarfed by the rest of the structure of the vessel. They may therefore be relatively inconspicuous, and you may need to look very carefully to see them; indeed you may need to use binoculars.



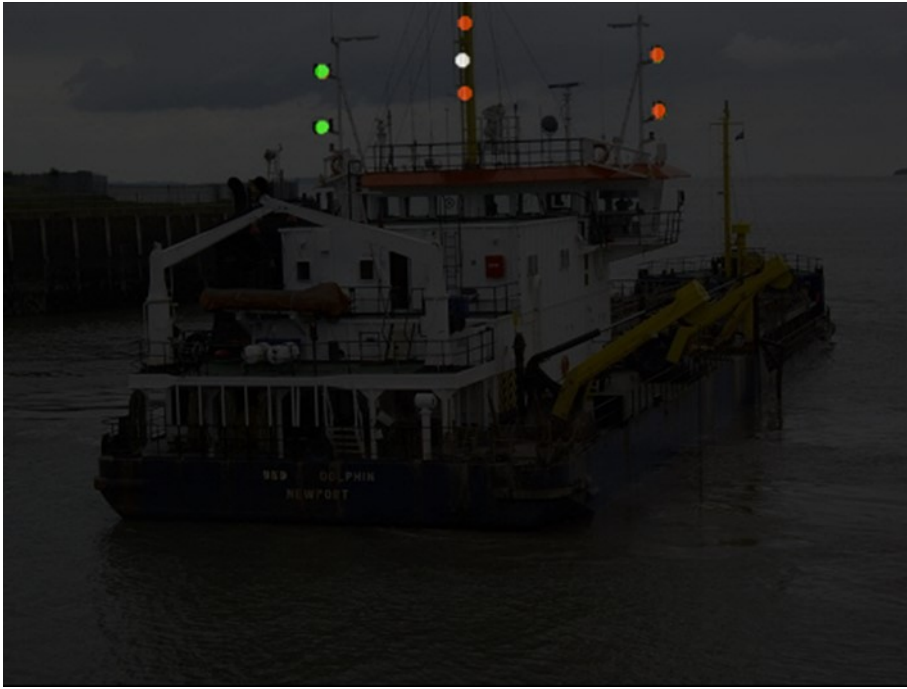
*Note that here the tow comprises the tug ahead plus the one aft, as well as the dredger.*

Lights; red, white, red, vertical. As one drives along our access track at night, looking towards Stanlow there is a significant length of the route for which there is a slightly bizarre transit of a white light (which I think is a flare stack) almost exactly in transit with a taller chimney behind it which is marked with red lights vertical (for aircraft avoidance), and the lights are almost equally spaced and in exactly the right order. Thus the Stanlow works complex appears to have a chimney restricted in its ability to manoeuvre!

Additionally, a vessel engaged in underwater operations (such as dredging) may have an obstruction on one side. She indicates this by two all-round red lights or two balls in a vertical line on the obstructed side, and by two all-round green lights or two diamonds on the side which it is safe for a vessel to pass. Note that this is not merely obscure theory which you will never need; it is not unusual to find dredgers working in the Mersey.



*Here note that although the RAM shapes appear a sensible size they might well be a lot smaller in real life.*



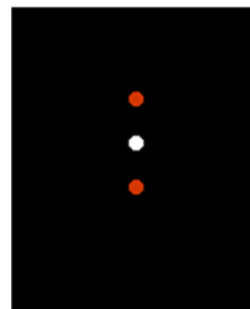
An important special case of underwater operations is a vessel operating a diver (or several divers).

If the vessel is large enough she displays the above lights and shapes, but a small dive boat instead displays a rigid replica of code flag “A” by day, and RAM lights by night. Again this is not mere theory which you will never need; although the Mersey is more than a bit murky for diving, some underwater work does entail using divers, and recreational diving can be found all round the country, anywhere where the water is clean enough for visibility. **This is therefore quite often seen, and it needs to be known and recognised; if you see it, keep well clear, and pass at slow speed.**

- **By day**
  - **Code Flag “A”**



- **By night**
  - **3 all-round lights, vertical; red, white, red**



**NUC**; this refers to a vessel **Not Under Command**, which means that because of mechanical breakdown or other exceptional circumstance she unable to manoeuvre as required by the Rules and so cannot keep out of the way of another vessel. Again, other vessels therefore have to keep clear of her.

It does not (normally) mean that the captain or skipper has gone ashore, or is drunk or otherwise incapacitated - although conceivably if the only competent person on board a small vessel was incapacitated by a medical emergency it might indeed apply, if there were someone else on board who could at least hoist the required signal.

She indicates that status by displaying two balls in a vertical line (by day), and by two all-round red lights in a vertical line by night. It is not often that you will see that - I don't think I have ever seen it, in a lifetime afloat - but if you ever do see it you will need to recognise it and give the vessel a very wide berth; be aware that her behaviour may be somewhat erratic.



In the late sixties I had the great pleasure of helping to staff an educational cruise on the British India Steam Navigation ship *Devonia*. Liverpool Education Committee had chartered her for a two-week cruise along the coast of Europe as far as Tangier (alright, that is just outside Europe), carrying (if I remember correctly) around 1150 children and something over 100 teachers, plus some adult paying passengers. While the kids travelled dormitory class, and ate in communal dining areas not unlike school style, converted from the erstwhile mess areas from her troopship days, the adult passengers and the teachers travelled cabin class, and ate in the ship's dining room. Ship's officers were delegated to host a table apiece, and on one occasion our host officer told a glorious story about NUC lights.

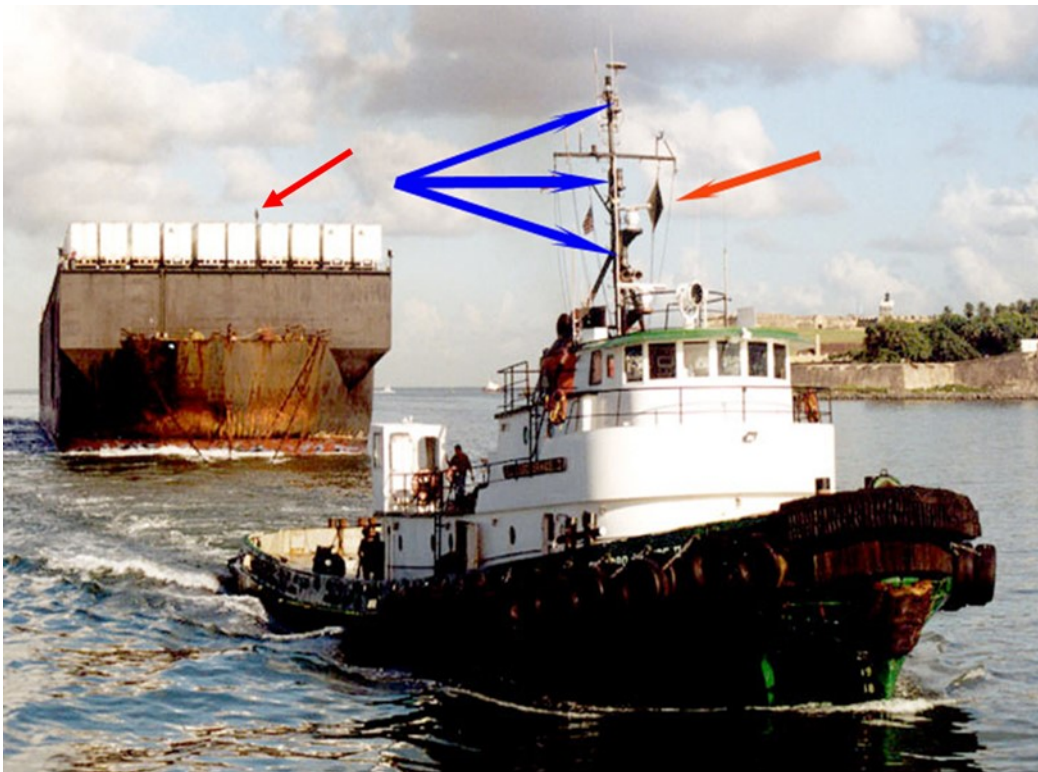
A candidate for his first mate's ticket was taking his viva examination, a face to face verbal exam, and the examiner asked him what signal he would make if his ship was not under command. "Hoist two black balls," he answered, absolutely correctly (so far as he went, albeit incomplete - no mention of them being arranged vertically). The examiner then asked him what signal he would make at night.

The candidate had a lapse of memory, but thought about it, and then inspiration dawned: "Hoist the two black balls, and train a searchlight on them."

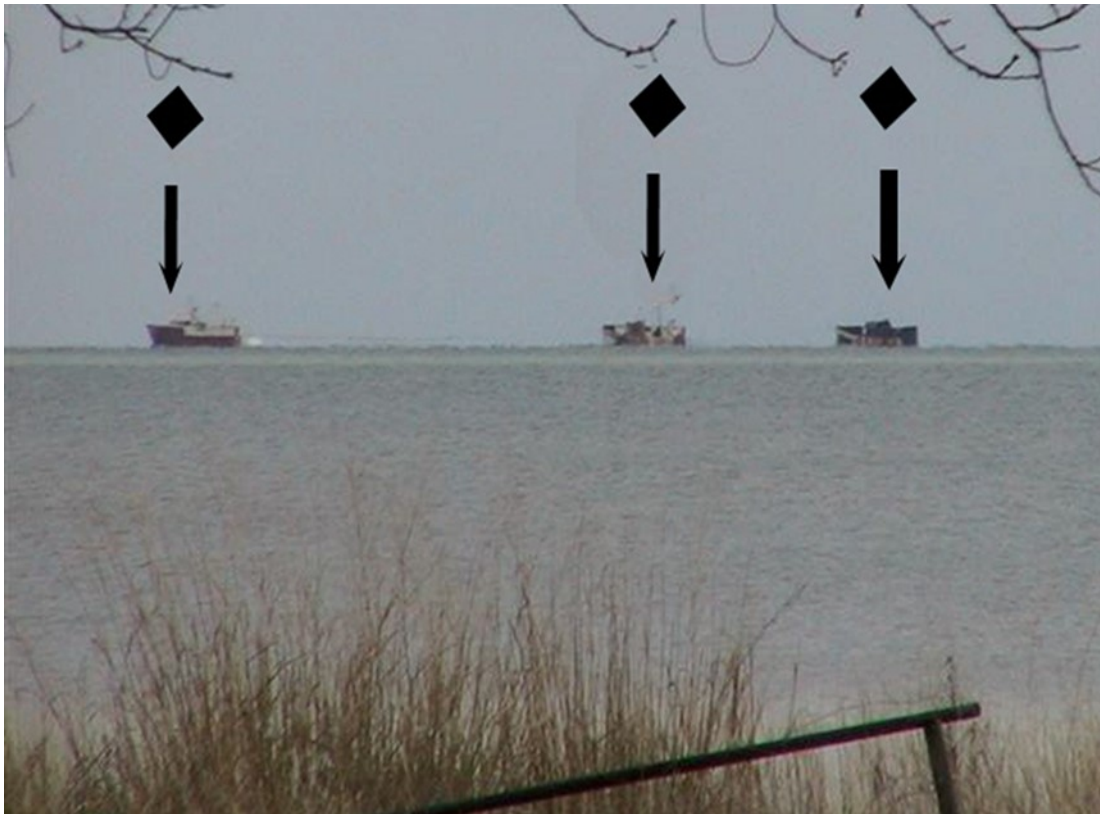
Think about it; not much light is going to reflect off the balls if they are indeed black, so they would not be easy to see ...

**Vessels towing** are not automatically given precedence, unless they are displaying RAM lights or day shapes, but it is nonetheless helpful to know that they are towing because of the increased length (combination of tug and tow) and reduced manoeuvrability. Both day shapes and lights vary to some degree, depending on the total length of the tow, but the day shapes can be loosely summarised as:

- Small boat towing small boat - nothing needed
- "Ship" tug towing ship, barge, or other load - a diamond "where it may best be seen"
- Extra long tows - diamond on the tug and another diamond at aft end of tow.



As with the other day shapes, these may in some cases be utterly dwarfed by the tow:



There is a useful aide-memoire to help you remember the distinction between the use of the ball and the diamond shapes:

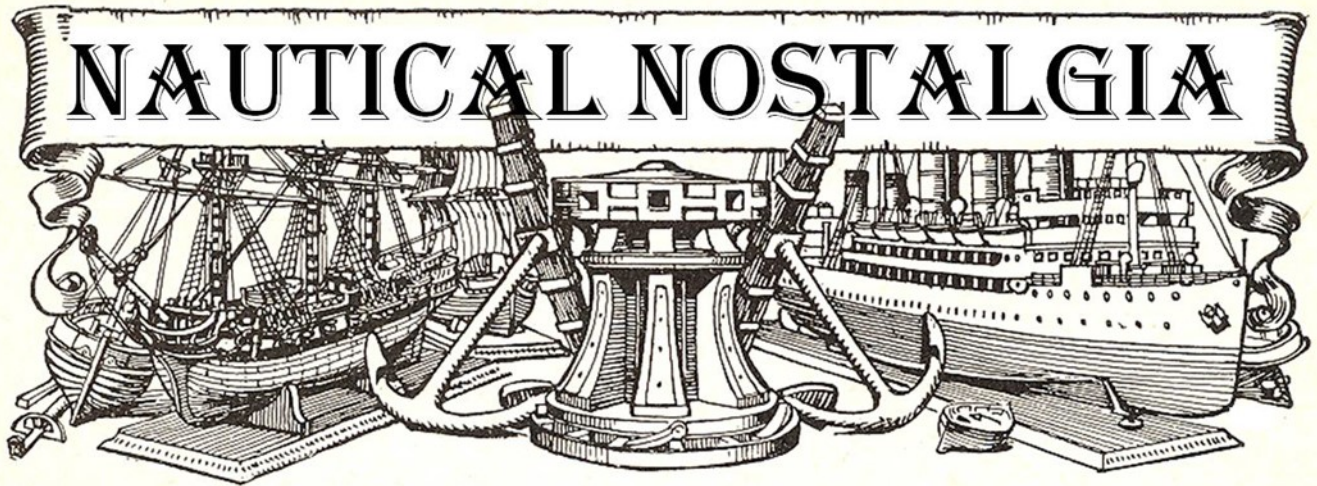
### Colour Convention – Balls and Diamonds

- **Ball day shape usually corresponds to RED light - but GREEN in the case of minesweeping**
- **Diamond day shape usually corresponds to WHITE light - but replaced by GREEN light when indicating the safe side to pass, and by NO light when marking a vessel being towed (but sidelights and sternlight are then shown).**
- **Applies throughout Colregs**
- **But this is helpful to you only once you know the lights required!**



**CD, TSSs, and Narrow Channels:** This group refers (respectively) to vessels **constrained by their draught**, or using a **Traffic Separation Scheme**, or restricted to **narrow channels**. In essence, we give way to all such vessels.

Note that under Port of Liverpool local rules, all the fairways in the Mersey, and the sea channels and approaches as far out as the channel is buoyed on both sides, are all to be taken as narrow channels (Rule 10 of the Mersey Channel Collision Rules). So, in essence, we give way to all shipping in the Mersey, and also in the Mersey approaches as far out as buoys Q1 and Q2.



## A VISIT TO SYDNEY

**Capt David Bray**

It was 1970. I was 2nd Mate in a cargo ship, the "City of Canberra", sailing on the MANZ line route between the East coast of the USA and Canada, and Australia. This was one of the many "cross trades" operated by British liner companies in those days. Trading between foreign countries, these ships rarely came to the UK. MANZ stood for Montreal Australia New Zealand Direct, and it was a shipping company in its own right, but chartered ships instead of owning their own vessels. Ellerman Lines had a shareholding in MANZ, and often provided vessels for this route. Loading general cargo in Montreal, New York, Boston, Philadelphia, Newport News and Savannah, then proceeding via the Panama canal to either New Zealand or Australia. On this voyage we were to visit Brisbane, Sydney, Melbourne, Adelaide and "Freo". For the return voyage to the USA we would load general and refrigerated cargo. This ship had about one-third of her cargo spaces refrigerated, so she could load about 3,000 tons of meat and dairy products.

Arriving in Sydney, we were treated to a wonderful passage up the harbour in brilliant sunshine. Passing through the iconic harbour bridge, we proceeded to our berth at Glebe Island. Cargo discharge would start immediately we were alongside.

All secure in the berth, hatches open, derricks rigged, cargo unloading started, gangs of stevedores at each hold. As duty officer I was very busy, making sure no time was lost.

As I walked along the foredeck, I glanced down No 3 hold. Stevedores were working in the upper tweendeck, just below. One of them called up to me "hey, Mate, what was the first ship lost in World War 2"?

I replied ""Athenia", why"? He didn't say anything. I had much to do so I hurried away.

Later that day, the stevedore foreman saw me and said "You've upset Joe".

I asked who Joe was. He said, "the guy who asked you about the first ship sunk in WW2. Joe is a little bit simple, and has an obsession with World War 2. You're the first person who's correctly answered one of his questions. He hasn't said anything since."

Oh dear! Well, I'm sure "Joe" recovered.

A few days later, cargo discharge completed, we sailed from Sydney. Routine unberthing job. The Second Mate is in charge of unmooring at the stern, with six or seven seamen handling the mooring lines and tugs lines. Once clear of the berth and tugs let go, I went to the bridge. I arrived on the bridge just as we were approaching the Harbour bridge. Just at that moment we had a total power blackout. Main engine stopped, no electrical power, no steering. Dead! As it happened, the rudder was about eight degrees to Starboard when power was lost, and it was effectively jammed there. The ship had headway, about 6 knots, and the head slowly came round to Starboard. We were out of control, heading for the Opera House! Quickly, the tugs were recalled, and were made fast alongside, one each side amidships. They would then be best placed to control the ships movements in the absence of our own main engine and steering.

Judicious astern power from the tugs stopped the ship with the bow almost touching the shore in front of the Opera house. Shortly after that, power was restored, and we were able to straighten her up, and get underway again. Only one minor problem. The tugs were coal-fired, both belching black smoke. Their funnels were right beside the ship's bridge, and the wheelhouse rapidly filled up with smoke! It just wasn't our afternoon!

Ever since that event I've embellished the story a trifle, claiming that I've been in a ship that had a collision with the Sydney Opera House! Not many people can say that!

That was all more than 45 years ago. Different world, different times. But just occasionally one is reminded of exactly how much time has passed.....

Just before I retired, I ran a DP course at my college at Lowestoft, one of many that I ran over a 25 year period. My students were all ships' officers, from all over the world. Looking at the enrolment forms on the first morning I saw that one guys address was Glebe Island, Sydney. I said "I've been to Glebe Island".

He replied "Oh you wouldn't recognize the place. It's all yuppie flats now. I live in one of them. No ships anymore, and all the container cranes have gone".

I said "What container cranes"?

The container revolution had come and gone since I was there.

Just for a moment I felt very old!





## NAUTICAL DEFINITIONS

**Plane Sailing** Note the spelling; not to be confused with plain sailing. A system of navigation without reference to the earth's curvature. With the exception of one detail, this is effectively what we all do in coastal navigation, when we tacitly assume that the Mercator chart (printed on a flat piece of paper) correctly represents the part of the earth where we are sailing (even though we know the earth's surface to be curved, approximately spherical).

The one detail where we do allow for the curvature of the earth arises when using the latitude scale up the side of the chart to measure distance; we recognise that the scale of the chart becomes (slightly) larger the further we go away from the equator (so in the northern hemisphere, the further north we go), so we place the dividers on the scale at the same latitude as the distance we want to measure. If we were measuring a distance between two points near the top of the chart, and we wrongly placed the dividers on the latitude scale near the bottom (or vice versa), we would in principle be introducing an inaccuracy; just how serious that would be would depend on the scale of the chart, and thus on the size of the area which it covers.

And for that matter plane sailing (or motoring, etc.) is also what we do when using a road map in the car, or while walking, albeit that we may be using a different map projection then.

This is not because all navigators are fully signed up members of The Flat Earth Society, but simply because over small areas - including most coastal navigation - the discrepancy between a flat surface and the actual (curved) surface is only small; so plane sailing is amply accurate enough. But it is not accurate enough for ocean voyaging.

**Fanny** A naval mess tin. Apparently named - somewhat gruesomely - after Fanny Adams, a girl who in 1867 was murdered and dismembered about the same time that tinned meat was introduced into the Royal Navy.

(Thanks to <http://readyayeready.com/jackspeak/termview.php?id=1033> for that information.)

The Wikipedia article about Fanny Adams herself contains an absolute gem of literary discretion, and due observance of what is polite and acceptable in print, while nonetheless making both its meaning and its references abundantly clear: "Used to express total downtime or inaction, the military, manual-trade and locker room talk phrase "sweet Fanny Adams" has been in use since at least the mid 20th century, vying with a stronger expletive. Unusually, the phrase is not a bowdlerisation; "Fanny Adams" arrived in 1860s naval slang to deplore unliked meat stews. It broadened to mean anything badly substandard, then further so as to merge with the expletive sharing its initial letters to mean nothing at all. The phrase also appears today as "sweet F.A."

**Vulgar Establishments at British Ports** No, not that kind of vulgar establishment, smacked wrists; this Newsletter is intended for family readership after all!

The phrase refers, not to houses of dubious repute, but to certain tidal constants. For any given port, the time of High Water at both full moon and new moon is roughly constant. That time (after averaging) is known as the Vulgar Establishment of the port, also variously called the Establishment of the port, the Common Establishment, the Tidal Difference on the Moon, and High Water Full & Change (HWF&C). More formally, it is the time that elapses between the moon's transit across the meridian at new or full moon (as shown in the nautical almanac) at a given place and the time of high water at that place.

It is called the vulgar, or common, establishment in order to distinguish it from the **corrected establishment**, which is the mean of all the High Water intervals, averaged over at least a month, and which is typically 10 to 15 minutes ahead of the vulgar establishment. Thus one can see where the name comes from.

Whichever name is used, the old Souwester yachtsmen's log books used to include a table of these times for a range of ports; and it is quite possible that some others do even today. Since the times of High Water become later each successive day, with daily differences averaging around 50 minutes (but slightly shorter intervals for springs and longer for neaps - and indeed it can exceed an hour and a half at neaps, e.g. on 6<sup>th</sup> and 7<sup>th</sup> October this year); thus it is possible to calculate an approximate time of High Water by making the appropriate adjustment for each day from the nearest Full Moon or New Moon.

The use of this data has perhaps declined with the almost ubiquitous use nowadays of smartphones, and the ready availability of tidal apps for use on smartphones. Nonetheless, one does not always have the phone to hand, to say nothing of the occasions when the phone has been drowned, or smashed, or simply lost, so there may still be a place for the older technologies.

Dates of full moon and new moon are often quoted in even very ordinary diaries, or you can of course actually **look** at the moon to see what it is doing; if you identify which phase it is in and make a rough estimate of what proportion is showing this is a whole lot better than nothing. In that respect I pass on a useful tip which I picked up over fifty years ago from the late Professor Richard Skemp, at the time my boss at the boys' tented residential sailing school which he ran and where I regularly worked during our school and university summer holidays;

**“The moon is a liar; if it makes a ‘D’ it is a crescent (crescendo) moon, i.e. getting bigger, or waxing; if it makes a ‘C’ it is a decreascent (decrecendo or decreasing) moon, i.e. getting smaller, or waning.**

Another tip; the tidal cycle lags slightly behind the lunar cycle, probably because of frictional effects. So expect spring tides (typically) 2 days after full moon and new moon.

The table below gives the vulgar establishments for a range of British ports, many of them UK holiday destinations, or at least reasonably near to holiday destinations; but note that these times are GMT, and for morning tides only. So add the hour during the summer, and also add 12 hours 25 minutes for the times of evening HW (at full moon and new moon).

Low Water is (on average) 6 hours 12 minutes before and after High Water.

The table omits Liverpool, perhaps because the publishers 45 years ago did not imagine any recreational sailing in Liverpool, and it is surprisingly difficult to find the Liverpool figure online; but as we all know, spring tides here are around midday and midnight. However by just averaging two randomly chosen full and new moon predictions, one for this year's September full moon (September 14<sup>th</sup>) and the other for the following new moon (September 28<sup>th</sup>), I make the vulgar establishment for Liverpool (Alfred Dock) to be somewhere around 1140 (GMT); averaging a larger number of such times would probably slightly adjust this figure.

Note however that predictions from vulgar establishments are approximate only; but for situations where an approximate time is sufficient and no other data is immediately to hand they can nonetheless be useful. They are amply good enough, for example, for predicting at what stage of the day you will be able to launch when on holiday, and they will usually be tolerably accurate for predicting what time.



## VULGAR ESTABLISHMENTS at British Ports

	H	M		H	M
Aberdeen .. .. .	01	00	Lamlash .. .. .	11	49
Aberystwyth .. .. .	07	37	Largs .. .. .	11	50
Aldeburgh .. .. .	10	45	Larne.. .. .	10	48
Ayr .. .. .	11	50	Lowestoft .. .. .	09	39
Barmouth .. .. .	07	46	Margate .. .. .	11	45
Barrow-in Furness .. .. .			Milford Haven (Pembroke Dock)	06	06
(Barrow Dock).. .. .	11	11	Morecambe .. .. .	11	26
Barry .. .. .	06	45	Mumbles .. .. .	06	02
Beaumaris .. .. .	10	30	Newcastle .. .. .	03	14
Belfast .. .. .	10	35	Newhaven .. .. .	11	14
Bembridge Point .. .. .	11	20	Oban .. .. .	05	26
Bridlington .. .. .	04	39	Plymouth .. .. .	05	26
Brighton .. .. .	11	15	Poole Entrance .. .. .	(08	50
Bristol .. .. .	07	18		(12	25
Chichester .. .. .	11	30	Portland .. .. .	07	01
Christchurch .. .. .	(09	00	Portsmouth.. .. .	11	30
	(11	30	Port St. Mary .. .. .	11	10
Cork .. .. .	04	53	Ramsey .. .. .	11	12
Cowes .. .. .	11	36	Rothesay .. .. .	11	57
Crinan .. .. .	04	49	Salcombe .. .. .	05	41
Dartmouth .. .. .	06	16	Scarborough .. .. .	04	11
Deal .. .. .	11	15	Shetland (Lerwick) .. .. .	11	06
Donaghadee.. .. .	11	13	Southampton .. .. .	(10	55
Douglas .. .. .	11	05		(12	57
Dover .. .. .	11	24	Southend .. .. .	00	29
Dublin (North Wall) .. .. .	11	32	Stranraer .. .. .	11	43
Dundee .. .. .	02	32	Swanage .. .. .	(08	20
Eastbourne .. .. .	11	13		(12	20
Exmouth .. .. .	06	27	Teignmouth.. .. .	06	00
Falmouth .. .. .	04	57	Thurso .. .. .	08	27
Fishguard .. .. .	06	58	Tobermory .. .. .	05	36
Folkestone .. .. .	11	07	Torquay .. .. .	06	00
Gareloch .. .. .	12	20	Troon .. .. .	11	50
Glasgow .. .. .	00	49	Weston-Super-Mare .. .. .	06	54
Great Yarmouth .. .. .	09	16	Wicklow .. .. .	10	29
Harwich .. .. .	11	59	Yarmouth (I.O.W.) .. .. .	(10	21
Helensburgh .. .. .	00	06		(12	22
Holyhead .. .. .	10	10			
Ilfracombe .. .. .	05	42			
Ipswich .. .. .	12	31			

The times quoted in the table are supplied by the Institute of Coastal Oceanography and Tides, Birkenhead.

Taken from a Souwester Yachtsman's Logbook purchased in 1974.

Another one by the same publisher purchased about 10 years later gave exactly the same data, but now called it "Tidal Differences On The Moon".

And note the absence of Liverpool from the list ...

## FURTHER ASPECTS OF TIDAL PREDICTIONS

### from VULGAR ESTABLISHMENTS

The short piece above mentions that we all know that on spring tides High Water here is around midday and midnight. This brings to mind a discussion on Openboat some years ago, in which it was pointed out that in the open ocean we would expect HW Springs to be midnight and midday, and we would expect HW Neaps to be 0600 and 1800 (GMT in each case). If you think about the alignment of sun, earth and moon to create springs, or neaps, the reason for those timings immediately becomes obvious.

However for coastal locations this timing becomes modified as a result of the sea bed bathymetry, and with differences of anything up to six hours in either direction for different locations (e.g. Plymouth, Salcombe, Oban, and most of the Bristol Channel) the pattern is so scattered that it would initially seem to be just about lost.

There was then a delightful closing post to this discussion, along the following lines. Sadly I cannot remember who wrote it, so I cannot properly acknowledge it.

*“There you are, sitting aboard your dinghy at the end of a splendid day’s sailing, enjoying the peace and quiet, the gentle zephyr of a breeze, and the birds. Ahead of you is a glorious golden sunset, and behind your back the moon is rising ...*

*“ ... And all around you are acres of mud!”*

And, while we are at it, just how reliable is that predicted time for HW Springs (and Neaps) for coastal locations? Looking at the data in the table quoted above is not a strictly valid test, because one could take issue with the distribution of the sampling points; but nonetheless we do have a substantial number of ports there, and they are spread around the British Isles, so a preliminary look might still be of some interest.

If we leave out those ports which have “double tides”, all of them in the very localised stretch from the Solent to Poole, we find from a numerical analysis:

Out of 73 “ordinary, single tide” ports, 32 of them, that is 44%, fall within 1 hour either side of the predicted midnight and midday. Given that we expect a lot of scatter, that is quite impressive.

The average discrepancy, across all 73 ports, is just 42 minutes. That is even more impressive.

42 of the ports, that is 58%, are closer than half-way through the demi-cycle (rounded to a cycle of 12 hours, so 6 hours flood and 6 hours ebb), i.e. discrepancies of less than 3 hours

Only 29 of the ports, 40%, have discrepancies larger than this.

## BAR CHAT

Two developments on the cruising front are worth reporting.

First, your President and Newsletter Editor was involved in developing and presenting a seminar in September on "Getting into Cruising", run by Manchester Cruising Association with the support of RYA. That is being offered to selected other clubs in the area, including ourselves; however our General Committee have discussed it and have decided that we don't really have enough members potentially interested in this aspect of our sport, so we might struggle to field an audience. But the offer has been made, and duly considered.

Second, wearing a different hat, as Cruising Rep of the GP14 Class Association, he has also recently developed and will imminently be running a weekend course on Advanced Dinghy Cruising Skills. That again has been offered to the club, and the Committee are very supportive of the concept. It is now under further discussion to sort out and agree the details, for possibly a date next year.

## UNUSUAL BOATS – 18

*Polar Bound*, seen by Mike Hall on the repair slip at Maryport a few months ago.



Photo: <https://www.yachtingworld.com/extraordinary-boats/polar-bound-extraordinary-david-cowper-purpose-built-aluminium-vessel-94424>

She was purpose-built for her owner, David Cowper, an immensely respected marine explorer and serial circumnavigator, to explore the channels of the Northwest Passage through the Arctic, and was built at the former McGruers yard in Rosneath which Cowper owns.

In 2016, in this boat, Cowper became the first person to transit the Hecla & Fury Straits since the discovery of that route in 1822. That has been claimed to be the world's most difficult sea route.

That was his sixth transit of the Northwest Passage, and followed a two-year refit after his fifth transit which had been via the McClure Strait, the most northerly of the seven routes.

Because of her intended use *Polar Bound* was built to be immensely strong, both in her scantlings and in the choice of hull shape. Cowper prefers to describe her as spoon-shaped, although others have said she is shaped like an egg. She is close-framed, with the stringers continuously welded rather than tacked, and the aluminium skin is 15 mm thick, increasing to 20 mm "at the shoulders". Every inch of the welds has been ultrasound tested. Cowper's comment about the conditions she was built for is "Nature is all-powerful, not to be held in contempt"; he has done his last three circumnavigations in this boat, and says that she has looked after him very well.



Polar Bound emerges from its building shed in Scotland.

Photo: <https://www.yachtingworld.com/extraordinary-boats/polar-bound-extraordinary-david-cowper-purpose-built-aluminium-vessel-94424>

David Cowper is one of the most self-effacing and unassuming circumnavigators, but he is held in immense respect, especially by fellow yachtsmen, and his achievements read like a catalogue of “firsts” and “fastests”;

- 1974 raced in the Observer Round Britain race
- 1976 was an OSTAR entrant
- 1979 broke Francis Chichister’s single-handed circumnavigation record by a day
- 1981 broke Chay Blyth’s single-handed “wrong way” circumnavigation record (and in a much smaller boat) by 72 days
- 1982 fastest person to sail single-handed round the world in both directions
- 1984 A “shakedown” circumnavigation in the former Dungeness Lifeboat *Mabel E Holland* made him the first person to do a solo circumnavigation via the Panama Canal in a motorboat.
- 1986 Left for the Arctic on a solo voyage that eventually lasted 4 years, in which the former lifeboat survived a sinking while over-wintering in the Arctic, and then went round the world a second time, arriving back home (Newcastle) in 1990.
- 2016 first to transit the Hecla & Fury Strait since 1822

There is an excellent article about him (and his present boat, *Polar Bound*) by Adrian Morgan, from which I have extracted this data, which covers vastly more ground than we have space to include here,

which is well worth a read. Published in Yachting World, October 11 2016, and available online at <https://www.yachtingworld.com/extraordinary-boats/polar-bound-extraordinary-david-cowper-purpose-built-aluminium-vessel-94424>

The same article is also found at <https://rnrmarineservices.wordpress.com/2016/10/11/polar-bound-the-extraordinary-david-cowper-and-his-purpose-built-aluminium-vessel/>

See also a video of an interview with him, and another article, at:

<https://www.youtube.com/watch?v=mjWfEhblcOc>

<https://www.telegraph.co.uk/active/6043184/David-Scott-Cowper-swept-away-by-ocean-life.html>

## NEXT ISSUE

**Press Date will be 15<sup>th</sup> December, please**