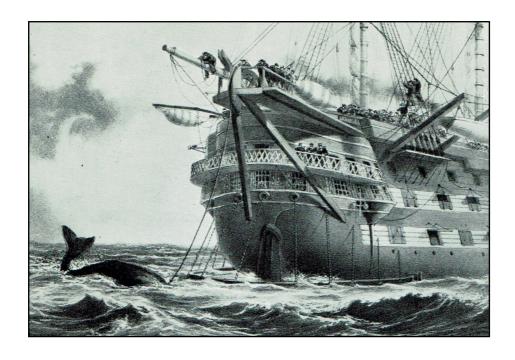
QUARTERDECK

The Friends of HMS Trincomalee

Spring 2020



Naval Communication in the 19th Century

Life in the Petty Officers' Mess

A Week with TS Foudroyant in 1960

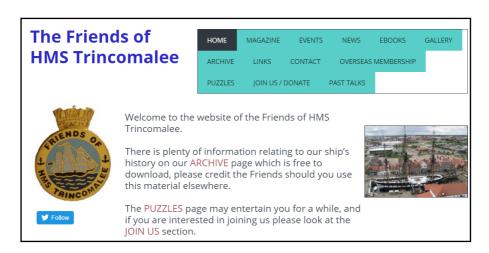
Naval Food & Drink Provisions in 1815

Mess Deck Crossword & Forward Events

The Friends of HMS Trincomalee on the Internet

Website: friendsofhmstrincomalee.org.uk

This has an archive of many of the articles that have appeared in the Quarterdeck, together with news and a listing of events.



Facebook Group: Friends of HMS Trincomalee



We have a closed membership Facebook Group. Members wishing to join this should either approach the group via its Facebook page, or send an email to the membership secretary.

EDITORIAL

Our ship has safely floated through the two storms this year, and her original Victorian age figurehead was taken to London on 17^{th} February for his restoration. The Friends of HMS Trincomalee have contributed £ 25,000 to the figurehead project with a similar sum from the Art Fund. We look forward to his return in summer and seeing him take pride of place in the exhibition gallery at the Historic Quay.

In this magazine we complete the history of communication in the nineteenth century, part one was in the previous issue. With thanks to contemporary reports relating to the Nautical Training Corps, we gain further insight into life on board our ship, as TS Foudroyant, sixty years ago. Our front cover picture shows HMS Agamemnon's encounter with a whale whilst laying a submarine cable in the Atlantic.

Finally we look at the food and drink provisions for crew members from two hundred years ago, perhaps not what the doctor ordered.

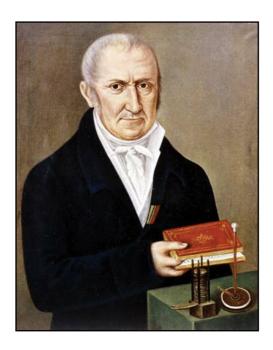
Hugh Turner

Naval Communication in the 19th Century (Part 2)

In the last issue of the Quarterdeck we looked at the development of long distant communications used by the navy, in the early to mid-nineteenth century. Now we will consider the use of electrical communications during the mid- to late-nineteenth century, the reign of Queen Victoria.

It took nearly a hundred years from the realisation that electricity could provide an "expeditious method of conveying intelligence", for the Admiralty to be connected from Portsmouth to London by electric telegraphy.

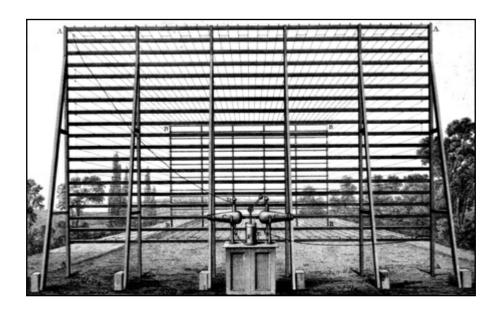
The beginnings of wired telegraphy start in 1747 when a member of the Royal Society, Sir William Watson, passed electricity through 10,000 feet of wire suspended at Shooters Hill near London. Benjamin Franklin did similar experiments in Philadelphia the following year, and in 1749 Du Lac did similar across Lake Geneva. Two problems needed to be overcome. The electricity used in these experiments was produced by friction as static electricity, and this was an erratic source of power, there was also the problem of insulation of the wires.



Alessandro Volta

In 1800 the problem of providing a controlled flow of electricity had been overcome. It was in this year that the Italian physicist, Alessandro Volta, informed the Royal Society of the invention of the electric battery. This battery used the discovery by another Italian physicist, Luigi Galvani, that electricity could be produced by contact between two metals. The battery supplied a gentle, steady and controllable current at a moderate voltage, just what was needed for an electric telegraph. Within months huge electric batteries were built. By 1810 André Ampère was showing how a magnetic needle could be deflected by an electric current.

Probably the first electric telegraph showing its practical use was constructed in a garden at Hammersmith, London, in 1816. This was the garden of a 28 year old called Francis Ronalds, at Upper Mall, Hammersmith. He placed two wooden structures in the garden, 20 yards apart. He then strung a continuous length of insulated iron wire backwards and forwards between these frames, with a total length of 8 miles. Ronalds was able to show that the transmission of electricity through the wire was instantaneous.



Ronalds' Electric Telegraph in his Garden at Hammersmith

Ronalds then built a second model with a shorter length of wire, 525 feet. The line was threaded through glass tubes and placed in a trench 4 feet deep and lined with pitch. The signals were received at the end of the wire by an arrangement of brass dials. Although his apparatus used high-voltage electricity, which probably would have failed over long distances, some principles in its construction and maintenance were of subsequent use. He had used a more efficient means of insulation then others had previously, and his underground wire was not so very different from those used later.

Realising the practical possibility of his device, Ronalds wrote to the Admiralty on 11 July 1816 stressing its "rapidity, accuracy and certainty", and he offered to demonstrate it. Although he initially received an encouraging reply, Mr John Burrow, Secretary of the Admiralty, wrote a letter on 5 August 1816 saying that "Telegraphs of any kind are wholly unnecessary, no other than the one in use will be adopted". The system in use was the semaphore system based on the devices of Claude Chappe.

As a result Ronalds gave up telegraphy and turned to meteorology. He was honorary director of the Royal Observatory at Kew between 1843 and 1852, He made a library of literature relating to electricity and magnetism, and in 1870, a year before his death, he received a belated knighthood for his services to telegraphy.

Having dismissed electric telegraphy in 1816, it was not until 1844 that London and the Admiralty were linked to Portsmouth. In the intervening time it was the need for signalling on the expanding railway network that gave the impetus to develop the telegraph. In 1837, 19 miles of wire had been placed between Euston and Camden Town, the telegraph using four wires and four needles to successfully convey messages.

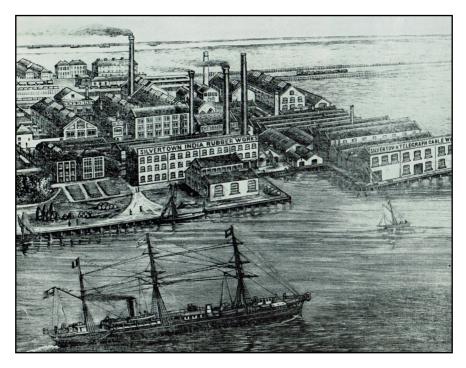
Both the "railway greats", Isambard Kingdom Brunel and Robert Stephenson, realised the significance of electric telegraphy. Towards the end of the construction of the Great Western Railway, an agreement was made in 1838 for telegraph wires to be laid alongside the rail track. Brunel made the decision to run the wires, insulated with cotton and carefully varnished, through a hollow iron tube below ground. The initial 13½ miles of the line from Paddington to West Drayton took just over a year to complete, opening in July 1839 with five-needle instruments at the two terminal stations. This was the first working telegraph in daily use over a fairly long distance, and its success made foreign countries wish to have similar systems.

As the telegraph wires extended along the railway network, it was in 1844 that the longest telegraph line so far was started between Nine Elms, London, and Gosport. This 88 mile long line on the London and South Western Railway linked the Admiralty in London with Portsmouth, and the Admiralty agreed to

pay £1,500 a year for 20 years, and £1,000 a year for a further 20 years for the maintenance of a double-needle telegraph for its own purposes. With the completion of the line in February 1845, the old semaphore system was nearly superseded.

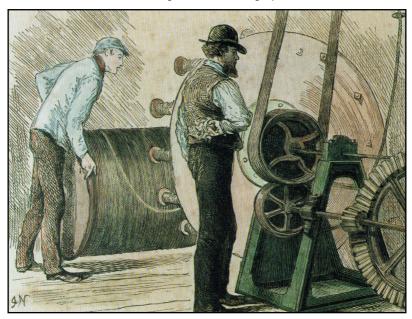
The first submarine cable was laid across the English Channel in 1850 by the English Channel Submarine Telegraph Company, The cable was 25 nautical miles long with a central copper conductor coated in ½ inch of the substance gutta percha. Michael Faraday in the 1840s realised the excellent insulating properties of gutta percha, which was produced from the latex of gutta trees present only in the Malay peninsula,

Gutta percha is a natural plastic which can be shaped when it is hot, and stays flexible on cooling, After being applied to submarine cables for insulation it needed to be stored in water to retain its properties. For a century gutta percha reigned supreme, until the development of polythene-based synthetics. Britain had a monopoly on gutta percha, and hence had a strangle-hold on the production of underwater cables.



The Gutta Percha Company site in London

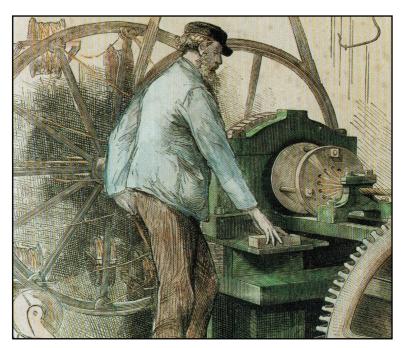
Manufacturing an electric telegraph cable



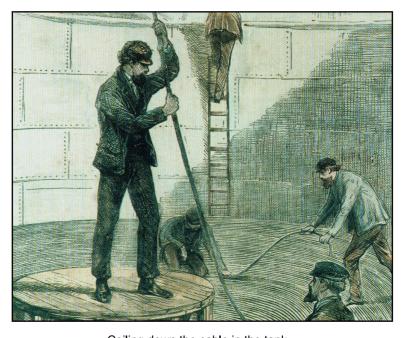
Coating the electric core with jute



Covering the cable with jute and tar



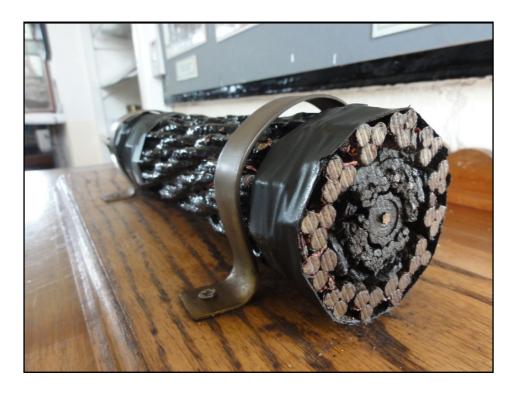
Covering the core with wire



Coiling down the cable in the tank

The 25 nautical miles long cable was manufactured by the Gutta Percha Company, on City Road in London. It was then mounted onto a drum which revolved on a horizontal axis, which was itself placed onto the deck of a small steam-tug called Goliath. The Goliath, with the cable on board, travelled from London to Dover. The two shore-ends of the cable were laid first. On the English side, a horse-box in the yard of the South Eastern Railway was linked to a structure of piles, part of the new Admiralty pier in Dover. On the French side the shore-end went just beyond the rocky ledge which stretches out from Cape Gris Nez, the headland near Calais.

The Goliath left Dover on 23 August 1850, the seaward part of the English shore-end was picked up and joined to the main portion of the line and the line was successfully laid. Signals were exchanged using this line, including one being sent to Louis Napoleon, however within a few hours communication failed completely. Apparently the cable had broken, some suspected that a fisherman might have brought the cable up whilst trawling in the Channel.



A section of submarine cable

A second cable was successfully laid across the Channel just over a year later, on 25 September 1851. The feat was announced to scientists at the Great Exhibition held in the Crystal Palace just as Queen Victoria was leaving the platform from which she had declared the Exhibition closed. This cable consisted of four copper wires, each covered with a double layer of gutta percha. These four wires were twisted together, filled with tarred hemp, wound over with tarred cord, and then all was covered in iron wire. This submarine cable was a longer term success than the first cable, and it encouraged many further submarine cables to be laid, for example between Portpatrick in Scotland and Donaghadee in Ireland.

In September 1856 the Atlantic Telegraph Company was formed in order to provide telegraphic communications between Newfoundland and Ireland. By this time the Atlantic Ocean had been surveyed by a series of soundings, and the depth between Newfoundland and Ireland varied from 1,700 to 2,400 fathoms as compared with depths of 6,000 to 7,000 fathoms further south in the Ocean. Valentia Bay was the choice for the Irish end of this Atlantic cable, with Trinity Bay, Newfoundland, for the start of the Western end.

The Gutta Percha Company began producing the cable in February 1857, the cable was 2,500 nautical miles long. HMS Agamemnon, a 91-gun ship which had been Admiral Lyon's flagship at the bombardment of Sebastopol, was adapted for cable-laying and half of the cable was stored aboard her. The other half of the cable was coiled aboard the US Naval steam frigate, Niagara.

The ships left Valentia on 6 April 1857 with the Niagara leading, from which the first half of the cable was to be laid. After 274 nautical miles of cable had been laid the ship pitched in heavy seas and the cable broke.

A second attempt was made in the spring of 1858. This time the two ships, the Agamemnon and the Niagara, travelled to the mid-ocean region, the two portions of the cable were spliced together and the ships separated. The Agamemnon laid cable towards Valentia and the Niagara towards Newfoundland. It was the fourth attempt using this method that was successful.

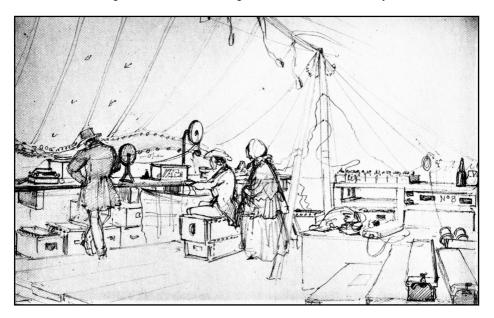
On 5 August 1858 the cable was landed at Trinity Bay, and on the same day the Agamemnon entered Valentia Bay. Trinity Bay reported "very strong currents of electricity throughout the whole of the cable from the other side of the Atlantic". Subsequently messages of congratulation were exchanged, using the cable, between Queen Victoria and the President of the United States, James Buchanan.

By 1880 nine cables crossed the Atlantic.



Monument in Telegraph Field, Valentia Island, Ireland

Marking the site where messages were sent to America by cable



Telegraph station in a tent at Valentia, drawn by Robert Dudley

The Great Eastern, Brunel's enormous vessel of the day at 22,500 tons, was used from 1865 to 1866 for laying Atlantic cables since it could take on board the whole cable required, eliminating the inconvenience of two vessels laying cable simultaneously.

In 1869 the Great Eastern was used to lay cable between Egypt and India for the British-Indian Submarine Telegraph Company.

Wireless telegraphy was the last major development in communication in the nineteenth century. In 1884 the chief engineer for the Post Office, Sir William Preece, discovered that wireless messages could be sent by induction. Telegraph wires 80 feet above Grays Inn Road in London were carrying messages which were coming from underground circuits with no linkage by wire between the two.



Sir William Henry Preece

At Newcastle, in 1885 the Post Office placed two rectangles of insulated wire parallel to each other and found that electric pulses fed into one loop would induce similar currents in the other. It was possible to transmit over a quarter of a mile without wire connection.

In 1889, at Coniston Water in the Lake District, William Preece succeeded in transmitting and receiving Morse radio signals over a distance of 1 mile across the water

In 1896 it was the same William Preece who permitted a twenty-two year old Italian, Guglielmo Marconi, to show his wireless telegraph apparatus to officials

at the Post Office. Initially trials held on Salisbury Plain did not impress Sir William, however in 1897 Marconi introduced elevated aerials to both his transmitter and receiver resulting in a dramatic improvement. By 1900 wireless was being tried out in naval manoeuvres and its importance for the military was clear.



Coniston Water, where radio signals were sent a mile over water in 1889

Hugh Turner

Join the Friends of HMS Trincomalee

Your membership card entitles you to free recurrent admission to HMS Trincomalee and the Historic Quay for twelve months, and to attend Friends' events. You will receive the magazine Quarterdeck which is issued three times a year, and know that you are contributing to the upkeep and presentation of our Ship. Further details are on our website:





Life in the Petty Officers' Mess

(The following notes are from the log kept by a Petty Officer of the Nautical Training Corps, R. Ackers, relating to when he was aboard TS Foudroyant in 1960.)

There were ten of us in the Petty Officers' Mess, situated aft on the Mess Deck – five rated up Petty Officers and the other five consisting of T/Ls (Team Leaders) and a Coxswain. When down hammocks was ordered I promptly reserved a space in the Mess whilst the other POs slept on the Mess Deck. Chief Officer Pilbeam was Duty Officer next day and he didn't discover me until 07.10, forty minutes after lash up and stow. I was generally known in the POs' Mess as "the only bloke we know who can skive an extra hour's kip". During the week it was 06.45 when I lashed and stowed – it wasn't that I was hidden but just that the Duty Officers forgot all about me.

Monday saw us ashore in Portsmouth Dockyard for Navy Day and almost everyone found some nice ship's Officer of the Watch to annoy.

Tuesday we had boat-work until the storm broke, and while that was on we POs took the other boys on the Lower Deck for instruction.

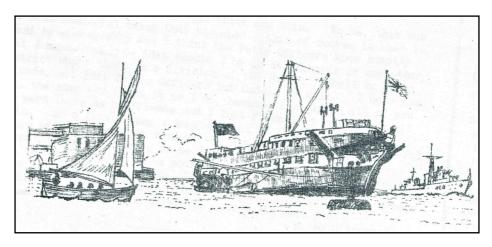
Wednesday we took our trip to the Isle of Wight, where everyone enjoyed themselves immensely. On the trip out there was hardly any wind and the tender "Scott Paine" had to tow all the sailing boats. On the return journey however, the wind was so strong that one of the sailing lifeboats beat Scott Paine to her berth.

Thursday we manned ship to salute HMS Vanguard as she was towed out of harbour on her last voyage to the breakers yard. We were the only ship in Portsmouth to salute the old girl in this way, and everyone thought it disgraceful that the present Flagship should not salute the old Flagship and last ever ship of the lone. This day also the POs went ashore on an initiative test, which was very easy but included a lot of foot-slogging.

Friday was Regatta Day and this year the Petty Officers beat the Officers' gig by 2½ lengths- of course one Officer didn't help them much by catching a crab and losing an oar. The Vice Commodore had some pointed things to say about that! Our Coxswain, T/L Stratton, was thrown into the water upon securing at the boom, he made a tremendous splash, being propelled by six lusty POs.

We all enjoyed the evening concert very much. At about 5 Bells in the First Watch the POs were invited to the Wardroom to sup a glass of cider and hear the results of the POs Course. All, I am glad to say, had passed with flying

colours. The next morning, being Saturday, saw me taking my party home plus six cadets of Southwick Division. So ended an enjoyable week, I wonder what next year will bring – I've started saving up already.



Sketch of TS Foudroyant by H McGilvray

A Week at Portsmouth with TS Foudroyant in 1960

(As reported by E F Woodman, Nautical Training Corps, First Officer TS Attentive)

Nineteen Girl Cadets, two Petty Officers and one Officer arrived for the third week in fear and trembling as we were 50 minutes adrift (due to trains being late, let me hasten to add). With kit neatly stowed in cases and carry-alls, kit bags etc. we arrived on the Saturday and in true seaman-like fashion departed from the ship on the following Saturday – with cases, carry-alls, kit bags plus sundry brown paper parcels, bags and bulging pockets. It was surprising how the kit managed to double itself in seven days afloat.

Highlights of the week:

The neat rows of sleeping cadets in hammocks and the sudden kaleidoscope of colourful 'shortie' pyjama-clad figures each morning after being extorted to "Wakey Wakey, rise and shine" etc., by the Duty Officer. The visit to HMS Dolphin to attend church and look over the submarine HMS Acheron and the departure of Acheron during the week for foreign service. The Cadets were also to cheer her out of the harbour, and to their great delight the Skipper not only acknowledged their wave but allowed the crew to reply.

The arrival of the Carrier HMS Albion with paying off pennant flying. This was a sight new to nearly all the Cadets. The ease with which the girls adapted themselves to boat work, both sailing and pulling. This was largely due to the clear and concise directions of the ship's instructors who took them away each day.

The rapidity with which PO Norman was rescued after her "accidental" swim by an Admiralty launch. Did they keep a permanent lookout at Dolphin for Foudroyant "incidents", I wonder. The deserted messes and upper deck during the evening hours and the packed fo'c'sle, all listening with rapt attention to Tim and Pete "arping". The strains as such dedicated ditties as "Our Flight Sergeant" and "Quartermaster's Store" together with the current "pop" echoed oddly round the gallant old Foudroyant and indeed, disturbed the ghosts of the past so much that on Friday night George, the head ghost actually walked!

For the Regatta we entered two Messes against the other organisations aboard and both crews pulled well. To our delight the crew coxswained by Cadet Fordham and with T/L Sisley as stroke reached the final and won the Regatta. The ship's concert which was attended by Capt. Noble, Vice Commodore Rooke and all Officers on board was most enjoyable. One of our Hammersmith Cadets, (Bishop) brought the house down with her act which were worthy of a professional, and our two POs together with T/L Turner gave a beautiful rendering of the Corps song "Rose of England". To end the evening, and before Capt. Noble presented certificates to the successful Cadets, I conducted the whole Nautical Training Corps contingent in "Crimond" and, to our great delight, Capt. Noble and Vice Commodore Rooke leapt from their seats and joined us on stage to add their voices to the

To conclude – of the 19 Girl Cadets no fewer than 9 gained their Foudroyant certificates, and the behaviour and attention to instruction during the whole week reflected great credit on the Cadets, and their various Divisions.



Solution to the Winter 2019-20 crossword

PROVISIONS

(The entry in Falconer's Dictionary of the Marine 1815 Edition)

PROVISIONS, those articles of food and sustenance which are served out daily to each person on board his Majesty's ships, under the superintendance of the purser, and consist of such as are undermentioned:

	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Tot. per Week.
Bread, lbs	1	1	1	1	1	1	1	7 lbs
Beer, galls.	1	1	1	1	1	1	1	7 gallons
Beef, lbs			2				2	4 lbs
Pork, lbs	1				1			2 lbs
Pease, pts.	1/2			1/2	1/2	1/2		1 quart
Oatmeal, pts.		1/2		1/2		1/2		1½ pints
Sugar, oz.		2		2		2		6 oz.
Butter, oz.		2		2		2		6 oz.
Cheese, oz.		4		4		4		12 oz.

together with an allowance of vinegar, not exceeding half a pint to each man per week. There is cocoa with sugar allowed for breakfast, as a substitute for butter or oatmeal, and lime-juice with sugar, as a beverage, when subsisting on salt provisions.

When the beer is expended, a pint of wine, or half a pint of rum, brandy, or other spirits is allowed daily, the spirits being always mixed with water, to each person, instead.

But no wine or spirits, are to be issued while in port, nor at sea until all the beer is expended: and no more is to be served out than the daily allowance; nor any for paying debts, or in lieu of other provisions, or on any other pretence whatever. Officers concerned in sending any allowance of wine out of the ship are liable to be dismissed from the service.

Captains may shorten this allowance, if necessity requires it, taking due care that the men be paid for the deficiency; nor is any officer to have whole allowance while the company is at short.

In foreign voyages, some of the above species may be changed; that is half a pint of brandy, rum, or arrack, for a gallon of beer. Four pounds of flour, sometimes three pounds, with a pound of raisins, or half a pound of currants, with half a pound of beef suet pickled, are equal to a four pound piece of beef, or a two pound piece of pork with pease: half a pound of rice, or two ounces of sugar, for a pint of oatmeal.

Prisoners of war, on board any of his Majesty's ships, have only two thirds of the aforesaid allowance of provisions.

Beef is cut into four pound pieces, and pork into two, and every cask is to have its contents marked on the head.

Every fourteen pieces of beef cut for eight pound pieces taken out as they rise, and the salt shaken off, are to weigh one hundred and twelve pounds avoirdupois.

By the regulations respecting provisions issued by the Victualling Office, May 18, 1797, if, according to this standard, upon the weighing of a whole cask of beef or pork in the presence of two or more warrant officers of the ship, there shall be found a deficiency of weight, the captain may order the purser to issue to the seamen so much more beef or pork as shall make up the deficiency.

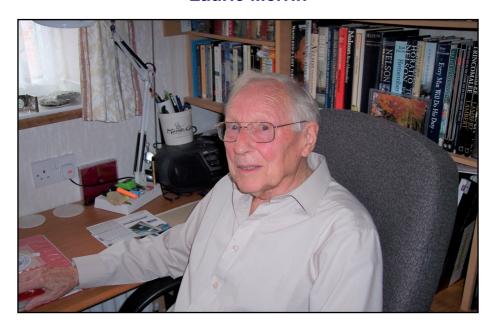
If there be a want of pork, the captain may order three pounds of beef to be given out in lieu of two pounds of pork.

One day on every week there shall be issued out a proportion of flour and suet in lieu of beef, but this is not to extend beyond four months victualling at one time.

Only three months butter and cheese shall be supplied for foreign voyages, the remainder to be made up in olive oil.

Fresh meat is to be allowed every day (when it can conveniently be done), instead of salt meat; three pounds of mutton accounted for a four pound piece of beef, or a two pound piece of pork with pease.

Laurie Merrin



We were sorry to hear that our first honorary life member, Laurie Merrin, passed away a few months ago. He was one of the first members of the Friends, serving as a committee member and trustee during this time.

Laurie was a Bounty Boy during the Second World War and found himself as a naval cadet aboard the Foudroyant in 1943, at this time the ship was alongside HMS Implacable at Portsmouth, both ships being used for training purposes.

We valued his contributions to committee meetings, and his donation of material to the Friends' archives which have helped the Editor a lot. Laurie spent his final years with his wife, Eileen, at Northallerton, and in October 2017 he came to the Historic Quay to celebrate the 200th anniversary of the ship's launch with us. The following day he was a celebrity in Northallerton after having appeared in the local media.

The following are extracts from the article he wrote for us which appeared in the summer 2012 issue of the Quarterdeck:

"On the first September 1943 (having only undergone a standard medical – no other tests) and as a direct entrant from Cadets to "Royal Navy communications branch" via a special scheme, later known as the "Bounty scheme", I found

myself standing on Portsmouth Harbour station at 4 O'Clock on a Sunday afternoon with many lads in "tidley" uniforms adorned with a variety of ranks and badges. Once collected by a Petty Officer we boarded a harbour launch and were transported out to HMS Foudroyant, where all badges etc. had to be immediately removed.



HMS Implacable & HMS Foudroyant at Portsmouth 1940s

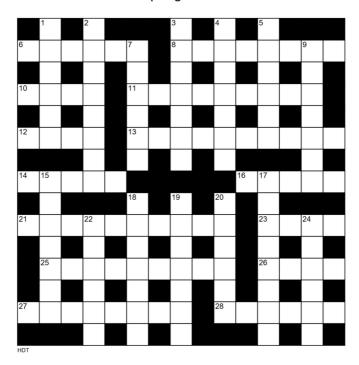
Next day we were taken (by harbour launch) to HMS Victory IV at Gosport and equipped with "pusser" (Naval, and mostly ill fitting) uniform and other necessary items, e.g. kitbag, gas mask, hammock and cut throat razor. The rest of the day was spent trying to make the uniforms presentable, by our standards, and learning how to sling a hammock and get into it. We were all under seventeen and a half years old, and therefore classed as "Boys" - 2nd class at that – receiving the princely sum of 3/- (15p) per week, and for that princely sum the Paymaster only came out to the ship once every two weeks. I survived on postal orders from home.

... We, I am positive, formed the first class on HMS Foudroyant and were the foundation of all future courses until the scheme finished in January 1947.

... In 1987, having retired, I moved to North Yorkshire at the same time as "Foudroyant" moved to Hartlepool when ship and I met up again. I have known this ship for over one third of its lifetime."

Mess Deck Crossword

Spring 2020



ACROSS

- **6** 3 months supply of this on foreign voyages in 1815 (6)
- **8** London site of the Guttta Percha Company (4,4)
- 10 Domed recess (4)
- **11** Burning (9)
- **12** In 1815 a sailor could have a daily gallon of this (4)
- 13 TS Foudroyant's tender (5,5)
- 14 D Day landing beach (5)
- 16 Type of radio signal (5)
- 21 Ronalds received signals with these (5,5)
- 23 Vessel used for storage (4)
- **25** In 1885 a place of early wireless experiments (9)
- 26 2lbs a week of this per crew member in 1815 (4)
- 27 American pioneer of wired telegraphy (8)
- 28 Chief engineer at the Post Office in 1884 (6)

DOWN

- 1 Designer of semaphore devices (6)
- 2 Study (8)
- 3 Submarine at Portsmouth in 1960 (7)
- 4 Capital of the State of Georgia (7)
- 5 Three horse powered Russian vehicle (6)
- 7 Tax on goods (6)
- 9 Canvas roofs (7)
- 15 Seaman (7)
- 17 Taken (8)
- 18 In theory (7)
- 19 Strips of wood for fastening things (7)
- 20 Hibernating (6)
- 22 Mending clothing (6)
- 24 Attacked suddenly (6)

THE FRIENDS OF HMS TRINCOMALEE EVENTS

2020

These meetings are at the Historic Quay, Hartlepool

11 March "Objectives and Activities at the Hartlepool Sea Cadets Wednesday – TS Trincomalee"

Jane Fox, Chair of the Hartlepool Sea Cadets

13 May "To Asia and Back – Life and Death at Sea in the 18th Century" Wednesday

Professor Stephen Martin MBBS FRAS LTCL

23 September Annual General Meeting Wednesday

25 November "Flotsam & Jetsam"
Wednesday A miscellary of short presentations

(Friends able to contribute please contact Martin Barker or any Committee Member)

All begin at 7.00pm – Talks starting at 7.30pm after refreshments These events are free for Friends, guests charged £3 each.

friendsofhmstrincomalee.org.uk



Aboard HMS Trincomalee 31st January 2020



Produced by and for The Friends of HMS Trincomalee Reg. Charity No. 1117790