



The Newsletter of the Nautical Professional Education Society of Canada

(Society founded in 1995 by the British Columbia Branch of The Nautical Institute)



July 2020 - 25th Anniversary Edition

was first published 25 years ago, in the same year the Society was founded. So for this edition, pages 2, 3, 4 & 5 contain that first issue, hopefully to remind some of the hard and interesting work they did that year. But first, a few words about the Society: -

As most "Seatimes" readers know, the emphasis of the Society today is the provision of Bursaries and Awards to students involved in nautical programs at learning establishments in British Columbia. But most also know that the Society began by providing financial assistance to Canadians with Watchkeeping Mates or 4th Engineers Certificates as they sought the requisite seatime to increase their qualifications. One such beneficiary was Captain Todd McBain (see https://npesc.ca/wp-content/uploads/2018/05/seatimes-18-04.pdf)

Recently a chance encounter with Captain Brian Silvester uncovered another beneficiary of that time. She is Captain Samantha McCandlish. In 1996 the NPESC found a position for her (Samantha Emms, as she was then) as a trainee watchkeeper with Shell Oil. Now she is the Master of a BC Ferry. Here is the story of her career: -

Prior to sailing with Shell, I had worked as a deckhand for the fast catamarans that ran Victoria/Vancouver/Nanaimo starting in '92. When they folded, I got a deck job with Victoria Line, the service that ran from Victoria to Seattle with the *Queen of Burnaby* (renamed *Royal Victorian*). I completed my Watchkeeping Mates ticket, but when applying for Mates jobs I ran into the refrain "Come back when you have some time on your ticket." Brian Silvester, who had been my instructor for the Watchkeeping Course at



Camosun, recommended that I apply for the trainee program that had just been started up through the Nautical Education Society. I did and in 1996 I went to work for Shell as a trainee. I was to receive \$1000 a month as a trainee, and Shell arranged for me to join one of their tankers. At the end of a 4-month period, and, if they were satisfied, I would be offered a job. Four days after I started as a trainee the 3rd Mate left the ship suddenly and I was offered the job, so I never used much of the "trainee program" funds. I was still grateful as it was only because of that program that I was there in the first place. I remember a steep learning curve when I started as Third Officer on 125,000t crude tanker. I asked a ridiculous number of questions and drew multi-coloured diagrams of piping systems. I spent a year with Shell, primarily in the North Sea area on product and crude tankers and it was a fantastic experience as it meant a lot of time in busy waterways. I left Shell and came back to Canada to be closer to home. I got a job with the Coastguard and spent a year with them on the Vector, one of the Ocean Sciences ships. That has been my favourite of all the places I have worked. The variety of trips all up and down the BC coast on a small ship was always interesting. A year later

I was offered and took a job with Seaspan working on their rail ferries running from the Fraser River to Nanaimo and Swartz Bay and I stayed there for 5 years before taking a job at BC ferries. I now work as Captain on the Southern Gulf Islands ferries, which allows me to be home with my family.

Sam McCandlish







The Newsletter of the Nautical Professional Education Society of British Columbia





Message from the President

It is indeed a pleasure to invite you to the first publication SEATIMES. I hope you will find the articles interesting and more importantly it will keep you informed about the activities taking place within the Society. I wish to commend Captains Kenefick and efforts Bowles for their publishing this newsletter and I am sure would welcome your feedback and participation.

As you are aware, our organisation is in the process of growth and development. Your Directors have been very busy conducting the numerous tasks that must be done in order to make the Society a success. Recent articles in the Vancouver Sun and Seaways are spreading the good news about the Society. I need your assistance to mention the Society's name to people that you contact. We need new members, corporate sponsors and organisations willing

associate with us. More importantly, we need Candidates who are willing and able to accept the assistance that the Society is able to provide.

Together we can do it!

Editorial Comment by Captain Janico Konofick Jocus on Firsts

In our first edition of Seatimes, we look at how the Nautical Professional Education Society of British Columbia began. The remarkable amount of achievements accomplished in its hectic first seven months are described in several newsletter articles.

Finally, we look briefly at another first. For the first time – 120 years, the **Conway** training scheme in Britain is being revived and revised to resolve the same problems there as The Nautical Professional Education Society of British Columbia was formed to deal with here.

The Winter edition of Seatimes will be ready in December. Please submit any items of interest to Captain Janice Kenefick at meetings or by phone/fax (604) 275-1796 or mail to #11 12411 Trites Rd., Richmond, B.C. V7E 3R6 by November 30, 1995.

Articles may have to be shortened and edited for space.

Thanks to Captain Stan Bowles for typesetting and graphics (as well as the catchy title of the newsletter) and to Captain Jim Steele for his article on the history of the Society.

Nautical Professional Education Society of B.C. Launched

Submitted by Captain Jim Steele

Last year (June 1994), at the Nautical Institute AGM, its members were asked to

give approval in principle for a project a few key members had been developing for some time.

The problem of too few, if any, opportunities for junior Deck and Engineroom officers to obtain sea time had been around for some time and something needed to be done. While we all feel the need to help our fellow mariners, there was the larger issue of a source for our surveyors, pilots, supercargoes, superintendents and senior officers. With the greatest respect to those present, we as Canadians cannot continue to assume officers from other nations will always be there to fill these positions. Furthermore, for the strength of our





own marine industry, we must take action.



A pilot program, if you will pardon the pun, was initiated by Captain Gavin Brown and

Heather Hathorn to obtain berths for four junior officers on offshore deepsea ships and was a success thanks to their considerable efforts imaginative and some and generous members of the N.I. who came up with funds to make it all happen. You should be aware that the program has been sold to the companies shipping on the understanding that they will not have to pay the junior officer whom we send them. This puts the onus on us to ensure that there are funds available for the officer to live on; or more importantly for his or her family to live on while he or she undergoes the training.



Now that the scheme had been tried and found practical, it became necessary to operate it separate from the Nautical Institute. It became necessary to set up a charitable society – The Nautical Professional Education Society of British Columbia. This allowed us to receive monies for the operation of the program from a number of sources and where appropriate, issue the all-important receipt for income tax purposes.

Thanks to a great deal of hard work and much scratching of the quill pen, our honorary legal counsel Lt.-Cdr. Gerald Stanford, The Society has been placed on a sound footing with respect to agreements with both our contributors and the junior officers or candidates as we call them.

Early on, we realized we might well have difficulty getting a viable program going without considerable capitalization. short, we needed money, we needed it now! At this point enter Silvester Captain Brian Camosun College who was aware of the provincial government's interest in training more British Columbians to get a job. In charge of the scheme is a very senior Naval Reserve officer disposed to the sea and the marine profession. Overtures were made to him and a series of meetings set up. The rest as they say is history, and there now exists an agreement with the B.C. government in which funds are made available to Camosun from the Ministry of and Training Skills. Labour, whereby the Society can draw on them as needed to provide a stipend for the junior officers we send to sea. The funds so far are based on \$1,000 a month and we have an initial budget of \$24,000, let's say four people for six months.

Now to make the process logical and above all auditable, we have struck several committees to process our through their entire time spent under the aegis of the Society.

I am happy to report the process is alive and well and to date we have processed the first group of candidates, of which the **Selection** Committee recommended several for placement by the **Shipowners** / **Shipmanagers** Committee. Our hopes are that when the activity of the Society becomes more widely known, more candidates will come forth.

In summary, we have made a good start through a lot of effort by the officers of the Society pounding the streets, talking to anyone who can help us. We have had a terrific boost from the B.C. government.

We need more people to join and support us, either as: -

- Individuals (\$40 a year)
- Affiliated groups (\$750), or by
- Corporate membership (\$1,000) We need people to come and present themselves as candidates and we very much need <u>you</u> to pass the word around.



Society Shows Seven Months of Achievements

Since The Nautical Professional Education Society of British Columbia was incorporated, a tremendous amount of work has been carried out. Those working in candidate recruitment, selection and placements have developed a wide spectrum of tools including specific procedures and policies to guide each step. Everything from a training agreement right down to choosing reference books for the candidates has been covered. So far over 10 candidates have been interviewed and the selection process is continuing as this article is being written!

Society members have sought support from shipping companies and now berths on tankers, passenger and other types of vessels are ready for the Society's candidates. Liaison with the companies has resulted in the enthusiastic support of Captain Jonathan Seymour, Executive Director of The International Maritime Centre of Vancouver. We welcome his involvement. Other visits have successfully and quickly informed the marine community of





the purpose and efforts of the Society.

Meeting members of the federal provincial governments and resulted in the provision of provincial funds from the "Skill Now" program. This critical financial commitment will enable The Society to pay candidates \$1,000 per month during their time We thank the B.C. at sea. government for supporting Canadian junior officers.

Membership recruitment efforts have provided a new Affiliate Member – The Company of Master Mariners – with other maritime organizations expressing interest. Our first Life Member – Captain Tony Crowther – Pacific Coast Shipping & Agency Ltd. and Annual Member – Captain John Lewis of the Justice Institute of B.C's Fire and Safety Training Centre have also joined the Society. A warm welcome to both!



The Society now has an attractive membership certificate, letterhead and logo. Brochures, information and press kits have been given to organizations such as The Canadian Institute of Marine Engineering, companies such as B.C. Ferries and international and local media as well as individuals. The kits have also been used in stories in the Vancouver Sun and Westcoast Mariner. A display board has been created for use at special events. The Society now has its own newsletter as well.

The very important and time-consuming business of setting up a new Society includes writing up a Constitution and Bylaws, setting up bank accounts, finding an auditor and so on. All those hard-working Society members who have contributed to the organization's many achievements should be very proud indeed.



The New Committees
Which Help the
Candidates Go To Sea

The Society has quickly established a candidate criteria, interview, selection and performance monitoring process, determined length of service, textbooks and suitable ships for candidates as well as obtained provincial government support to pay them.

Most of this is due to the hard work of the following new committees:

Candidate Selection and Monitoring Performance Committee - interviews and selects candidates. develops programs, provides a training written agreement between Society, candidate and the monitors candidates during their time at sea and arranges awards and certificates.



Ship Managers / Shipowners Committee — carries out the critical business of obtaining berths at sea through liaison with shipping companies and providing an agreement between the company, candidate and the Society. This committee also assists candidates in joining and leaving their vessels.

Financial Assistance Committee – oversees the obtainment, management and distribution of funds for the candidate by reviewing their financial circumstances as well as liaising with the shipping companies to arrange wages.

Many thanks to Captains Brian Silvester, Stan Bowles, Ms. Heather Hathorn, Lt.-Cdr. Gerald Stanford, Captains David Whitaker, Tony Crowther, Gavin Brown, Roman Piechocki, David Batchelor. Jonathan Seymour, John Swain, Ron Cartwright, Mr. Barry Shepherd (CIMarE), and all others whose efforts on these committees have made The Society's work so successful. A thank you also to Captain Ed of Monteiro, Chairman Society, Captain Jim Steele. Secretary and V.P. Administration and to Captain Jim Arnott, Chairman of The Nautical Institute. B.C. Branch.

Jext Book Chosen for Candidates

Candidates will use The Nautical Institute's Bridge Watchkeeping Guide and the IMO Supplementary Training Record Book. When The Study Guide on Watchkeeping in Port is ready, this too will be used.

Ports Day Sparks Interest in Society

Captains Jim Arnott, Stan Bowles and Janice Kenefick arranged the Society's display at the Pacific



Marine Training Centre (PMTC) on Ports Day in May. Set on a blue velvet background, a display of laminated posters of vessels and suggested marine careers were placed under the organization's title and the question the Society was formed to answer - "Where will the next generation of Superintendents. surveyors..... come from?" Brochures and application forms were also on hand. Captain Jim Arnott reported considerable interest support for the Society including PMTC students who made a special trip in on Saturday to The Society display. All the brochures were taken and the event was a success by all accounts.

The display was used again at The Nautical Institute AGM on June 17, 1995 and is available for members to use at special events. Contact Captain Janice Kenefick (604) 275-1796.

Information / Press Kits Available

Nautical Education Society of B.C. information kits are now available for members. The kits contain the following: Brochure – Where Will The Next Generation of: Supercargoes, Surveyors, Superintendents and Senior Officers Come From?

News Release – one page describing the Society.

News Release – one page on government funding.

Article – Enhancing Nautical Education and Careers by Lt.-Cdr. Stanford (This article on the history of the Society was also published in Seaways).

The Society's Statement of Activities.

Membership Application.

To obtain information kits, contact Captain Janice Kenefick 275-1796 or let me know how many kits you need at the next meeting.



Next Society Meeting Date

Next meeting of The Nautical Professional Education Society of British Columbia will be on September 5th at 1745 in the Tsawwassen Training Room OR at the call of the Society Chairman, Captain Ed Monteiro.

From: The Bulletin of **The Institute of Marine Engineers (UK)** July 1995

Quality Training Tradition Revived at Conway

The Conway Merchant Navy Trust is to sponsor a small number of deck and engineer cadets for the Merchant Navy each year from 1995/6 continuing a tradition which ended nearly 120 years of hands on training with the closure of the Conway Cadet School in Anglesey in 1974.

Captain Andrew Tyrell, chairman of The Trust, said that there is widespread concern in the shipping industry that in the future the UK's world-renowned maritime expertise will become diluted as fewer officers of quality are being trained. He said: "The Trust aims to recruit well qualified and motivated school leavers and

support them not only through their cadetship but encourage and assist them to go on to higher qualifications and wider experience for a rewarding career in the maritime industry.

Officers of The Nautical Professional Education Society of British Columbia

Captain Ed Monteiro - Chairman Captain Jim Steele - Secretary and V.P. Administration **Captain Tony Crowther** Treasurer and V.P. Finance **Captain David Whitaker** Fundraising **Captain Janice Kenefick Public Relations Heather Hathorn - Placements** Lt.-Cdr. Gerald Stanford **Honorary Counsel** Captain Jim Arnott - Director ex-officio from The **Nautical** Institute, B.C. Branch.

> New Members of The Nautical Professional Education Society of British Columbia

The Company of Master Mariners of Canada:
Affiliated Organization

Society Life Membership Captain Tony Crowther

Society Memberships: Captain John Lewis Captain Mark Stevens Captain David Smiley and Captain Syd Palmer





"Deck Watch" – War & Weather Instruments: Today weather predictions are compiled with sophisticated instruments and modelling techniques. If we're planning a summer bbq we check the long range forecast and with reasonable confidence choose a sunny day next week for the event. If our bbq is rained out we blame the weather forecast.

In the 1940s weather prediction was based on extrapolation from current conditions – using the weather to figure out the weather. There were elementary weather stations in the UK, as well as British ships in the North Atlantic and aerial missions that collected information. Allied forces, having cracked the code, were also able to intercept weather information Germans transmitted. However, short-range predictions were unreliable at best, and long term forecasts impossible.

Weather information was so critical to wartime planning that the Germans developed automated weather stations housed in compact metal canisters fitted with batteries, which gave pressure, temperature and humidity data. Some were equipped with radio antennas strong enough to transmit across the Atlantic.

Weather data was so important it was worth the risk – and in 1943 a Nazi submarine sent soldiers in rubber dinghies on to the northernmost tip of Newfoundland to install one of these weather stations. To disguise the station soldiers labelled the equipment "Canadian Meteor Service" and littered the site with empty American cigarette packages and butts.

D-Day was not a bbq. For the invasion at Normandy General Eisenhower needed a moderate wind, full moon and low tide at dawn. Picking a day the first week of June with these conditions was critical, getting it wrong would be a disaster. One ship reported rising pressure suggesting a ridge of high pressure would dominate through June 5th.

Then came weather conditions from the lighthouse keeper on Blacksod Point* in Ireland – the glass was falling rapidly and there were Force 6 winds. Eisenhower's weather advisers told him that June 5th would be a disaster with high winds and surf that would swamp landing craft and cloud cover too low to launch paratroopers. Reluctantly, Eisenhower postponed D-Day to June 6th.

The Germans expected the bad weather to continue and that the Allies wouldn't risk an invasion. They were so confident that the German commander in Normandy, Erwin Rommel had gone home to give his wife Lu a pair of shoes he'd bought in Paris for her 50th birthday when the Allied forces landed in Normandy.

Today our weather forecasting abilities allow us to plan ski trips in fresh powder, pig roasts and camping excursions under clear skies, and June brides to plan outdoor weddings.

Let's see if we can identify some of the high tech equipment and modelling techniques used today in weather forecasting: -

1. Transmissometer 4. Ceilometer

7. Hygrometer8. Snow gauge

10. What was the German code word for the "Canadian Meteor Service station?

2. Nephoscope3. Anemometer

5. Wind profiler6. Disdrometer

9. Radiosonde

Answers on Page 11.

"Deck Watch" is produced by Captain Barb Howe. Her column can be found in the monthly editions of the "Western Mariner" magazine. This article appeared in the December 2019 edition and is reproduced courtesy of Captain Howe.

To learn about Blacksod Point and that Weather Forecast see: -

 $\frac{https://www.independent.ie/irish-news/how-blacksod-lighthouse-changed-the-course-of-the-second-world-war-30319681.html \\ https://www.mayo-ireland.ie/en/towns-villages/belmullet/belmullet-blacksod-lighthouse.html$

https://www.history.com/news/the-weather-forecast-that-saved-d-day

https://www.thegwpf.com/the-most-important-weather-forecast-of-all-time-d-day-june-6-1944/

Back to the Future: Wind power and the decarbonisation of shipping

Marine shipping is undergoing a major transformation as it seeks to decarbonize. Will wind power be part of the solution? As a significant contributor to greenhouse gas (GHG) emissions, pressure is building on the marine shipping industry to meet ambitious carbon emission reductions of half the 2008 level by 2050. And the answer -- as Bob Dylan famously sang -- is blowing in the wind.

Virtually limitless, wind is synonymous with the history of shipping, and an important supplement to other energy sources that could make the industry greener and those carbon-cutting objectives achievable. But with the revival of wind power, engineers and ship designers are harnessing new technologies and materials that provide a more modern take on the cloth, flax, and linen sails on wooden masts of yore.



for cargo ships.

Nautical Professional Education Society of Canada. Founded in 1995 by the BC Branch of The Nautical Institute.



In their simplest form, modern high-tech sails are arranged on a ship's deck to catch the breeze based on sophisticated computer software. But such a rig can clutter the deck of the ship and interfere with the loading and unloading of cargo. So AirSeas, a spin-off of Airbus Industries, has developed an industrial-scale kite that can pull a ship along without taking up very much room.

There are several takes on reducing the intrusive nature of sails to make them more efficient. The Dutch company eConowind has developed a highly-efficient suction wing called a Ventifoil, which uses an internal fan to enhance the

boundary layer of an airfoil to produce more "lift" which drives the ship forward.

Another example, and probably the most innovative and widely used wind-driven technology, is the Flettner rotor. These look nothing like a sail and harness the Magnus effect named for the 1850s German physicist. He noticed that when a spinning object - such as a ball moves through the air, it experiences a sideways force. To capture this effect on ships, giant tubes are mounted vertically on its deck like upright pipes, and a small electric motor gives them their spin. When the wind blows from the side of the spinning rotors, the Magnus effect creates a forward thrust.

There are six ships operating globally with Flettner rotors including an Ultramax bulk carrier, an oil tanker, ferries, and vehicle carriers with three more coming on stream later this year. The narrow vertical rotors

don't take up too much room and can be mounted on trolleys so they can be moved during loading and unloading operations

Preliminary estimates of the fuel consumption and greenhouse gas reduction benefits to be gained by retrofitting sails to ships varies from 1% to 47% depending on the number of sails, and the speed and direction of the wind, according to the International Council on Clean Transportation. Usually, the sails are deployed if the wind direction happens to be favourable, but what if ships could take advantage of modern global positioning and weather forecasting technology to plan their routes to maximize the wind? How much greater an advantage could that be?

While these technologies can be retrofitted to existing ships, others have taken a more radical approach. What if the shape and structure of the ship itself was designed to catch the wind? Usually, mariners are fighting against the effects of cross



winds, but if the hull of the ship could be designed to act more like a wing, then the ship could literally fly through the wind using its hull as a sail. The International Windship Association says purpose-built wind assisted ships would have a 50% average reduction in fuel consumption and GHG emissions, and some designs could be fully wind-powered.

The shipping industry has serious challenges ahead to reduce its carbon footprint. There are other competing low carbon options under development but so many of them seem to be focused on finding replacements for traditional fuels. To make a radical change like moving to wind power will require structural changes. Ships are large investments with lifespans of 30 or more years, so ship owners who purchase vessels need to be sure they could share in some of the fuel savings to be gained by the ship operators who lease them to justify the investment. And operators would need to factor limitations on cargo capacity or extended

journey times because of wind conditions.

But all these problems don't seem insurmountable given how large the opportunity is, and this time it will be a good thing if history repeats itself so ships are once again powered by the wind.

By Edward Downing, the Communications Director at the Clear Seas Centre for Responsible Marine Shipping, Vancouver, BC. Find out more at clearseas.org

Graphics: Courtesy of IWSA (International Windship Association) http://wind-ship.org/en/grid-homepage/

Correspondence: From Captain David Batchelor - Thank you for another great publication. While reading the various articles two incidents from my seagoing days came to mind, which I would like to relate to you. Do with them what you like. The recall for me was so clear, and a little scary.

"Should you call the Master?" It happened towards the end of my first trip as 3rd Mate on the BP tanker m.v. Clyde Surveyor back in 1964. I was on the 8-12 watch on a dark and rainy night on passage from Gothenburg to Ystad, a port in southern Sweden. We were heading south through The Sound, which in those days, had a myriad of flashing lights. Many of the lights were on buoys and beacons marking the safe channels through the waters between Denmark and Sweden. There were also many shore lights, both for navigation and those in towns. The ship I was on was old. In fact, we were taking her to her final resting place, the scrapyard. The radar wasn't working, which was guite normal, and we had a Decca Navigator on board (remember them??) that was not reliable for position fixing, particularly in that area.





To cut to the chase, I got lost!! I was not able to fix the ship's position with any degree of certainty so I eventually 'bit the bullet' and called the Master, Capt. Peter Richards. He came to the bridge immediately and with a calmness that came from many years at sea, asked me the problem. He then methodically led me through a series of actions that in short established the ship's position. Believe me, I was shaking when I called him as I had visions of running aground etc. I have never forgotten the way Capt. Richards handled the situation with such equanimity, which gave me a model to use in my career at sea and ashore from that time on. I learned a 'life lesson' - to be humble and honest!

As an addendum to that story, I joined the *Clyde Surveyor* in Shellhaven, on the Thames, as a 'green' 3rd Mate with the ink still drying on my 2nd Mate Certificate of Competency FG. We sailed from Shellhaven, in the Thames, in the late afternoon so by the time I went on watch at 2000 hrs. we were approaching the pilot station at Folkestone then heading westbound in the English Channel. Once clear of the pilot station, on a clear October evening, Capt. Richards turned to me and said, "Are you comfortable? If so, she's all yours. I will be in my cabin if you need me". I looked out the wheelhouse window at the usual crowd of shipping traffic and thought, "Wow! The Captain has left me on my own to navigate through this lot". That was such a confidence booster and typified Capt. Richards and how he treated his officers and all personnel. A great man in my eyes! For the record he was a Younger Brother of Trinity House.

"The ship that ran backwards". Mine is a different story that took place during extreme weather conditions such as described in that article. I was a Navigating Apprentice on board the fully loaded 12,000 dwt. BP Tanker m.v. Clyde Pioneer en-route from Mena al Ahmadi to Antwerp. It was the night of November 5th 1961 with a storm force westerly wind blowing in the Malta Channel and we were hove to. "Sparks" received an SOS from the Clan Line ship Clan Keith that had hit rocks

near Cape Bon, Tunisia, and was sinking. Apparently, we were only about 15 miles away from the disaster but could do nothing to help because we could make no progress in the Force 12 winds and associated heavy seas. We were in radio communication (see copy of message below) with other ships in the area but indicated we were unable to help. The next day, following a fix of our position it was determined that in the previous 24 hours we had made only 10 miles - BACKWARDS!!! It was a helpless feeling for all of us on the ship – so near yet so far.

The *Clyde Pioneer* was built in 1951 and was underpowered, as were most of the ships in that class, by a B&W 6-cylinder diesel engine, hence the struggle in bad weather conditions. At best, "going downhill and a following wind" we would manage about 12 knots!!



Clyde Pioneer (above) entering the Mediterranean Sea from the Suez Canal

	Office of Origin	Serial No. No. of Words	Date 19	Time	Service Instructions		
sos							
RECEIVED from	TUNIS RADIO	Call Sign	5VX	Date 6	11 19 61	Time u922	BYA.L.
REPLY TO THIS MESSAGE BY RADIO		SHIP CLYDE PICKER! Receiving Ship Dues -					
		To 303 =					
SI	IAL RADIO ERVICES	SURVIVORS FROM SURVIVORS FROM SETIMATED POSITI CLANKSITH 68 ST PRESENT POSITIO	LIPSBOAT ION OFF B OP AM SEA	MV CLANK CUBLLES RCHING F	EITH WHICH DES SORREI OR MORE SU	BLEW UP A LES STOP TO RVIVORS STO	051830 IN ORAL CHEW OF OP OUR

To read more about the *Clan Keith, go to http://www.bandcstaffregister.com/page4400.html* and https://api.parliament.uk/historic-hansard/lords/1961/nov/16/the-loss-of-the-clan-keith





From Brendan Vallings - A "Seatimes" reader in New Zealand: In the story "The ship that ran backwards" reference was made to a vessel that was lost in that storm off the coast of Ireland, the

Tresillian. "I recalled, after checking my log, that my ship, the Somersby of Ropners, was in that storm in the Irish Sea and I was nearly washed overboard. I was walking down the after deck holding on to a lifeline when a sea broke on board throwing me off my feet. Luckily, I ended up wrapped around the rails round the poop, not entirely overboard".

All of the above caused me to check my "Cadet's Journal" to see where I was on November 24th 1954. I learned that my ship, the Syrian Prince* (right), was in Cyprus loading carob beans and citrus fruits for Dublin and Glasgow. We entered the Irish Sea two weeks after that storm. David Whitaker

* The Syrian Prince was one of the ships ordered by Prince Line after the British Government passed the British Shipping (Assistance) Act in 1935, making funds available to owners placing orders with British shipyards. They applied for a treasury loan under the Act, proposing to



build four ships for the Mediterranean service. The Act required the scrapping of twice the tonnage built, hence the term "Scrap and Build". They agreed to scrap Sailor Prince and Stuart Prince, built 1907 and 1905 respectively, against a loan to build the Arabian Prince and Syrian Prince, costing £65,000 each.

My favourite anecdote of this ship is: At night, when in port, we had two floodlights trained on the funnel so that the world could see what line we were. At some time during the evening the Cadets might be called to turn off the floodlights. The reason? The Master wanted to make some tea but the floodlights and the plug for his kettle were on the same circuit. If all were being used at the same time they would blow a fuse.

Did you know that many old English proverbs and idioms originate from sayings used by seafarers? Here's a couple of favourites....

"At a loose end": In nautical terms, a loose end refers to a rope that has been left unattached or unused and therefore has no purpose. Hence the term has been adopted into modern language to mean, "to have nothing to do".

"A clean slate": A ship's course was traditionally recorded during each watch on a slate, which was then wiped clean for the next watch. These days the term connotes a fresh start.

Scientists explain magnetic pole's wanderings: European scientists think they can now describe with confidence what's driving the drift of the North Magnetic Pole. It's shifted in recent years away from Canada towards Siberia. And this rapid movement has required more frequent updates to navigation systems, including those that operate the mapping functions in smartphones.

A team, led from Leeds University, says the behaviour is explained by the competition of two magnetic "blobs" on the edge of the Earth's outer core. Changes in the flow of molten material in the planet's interior have altered the strength of the above regions of negative magnetic flux.

"This change in the pattern of flow has weakened the patch under Canada and ever so slightly increased the strength of the patch under Siberia," explained Dr. Phil Livermore. "This is why the North Pole has left its historic position over the Canadian Arctic and crossed over the International Date Line. Northern Russia is winning the 'tug of war', if you like," he said.

Earth has three poles at the top of the planet. A



geographic pole, which is where the planet's rotation axis intersects the surface; the geomagnetic pole is the location which best fits a classic dipole (its position alters little); and then there is the North Magnetic, or dip, Pole, which is where field lines are perpendicular to the surface.

It is this third pole that has been doing all the movement.

When first identified by explorer James Clark Ross in the 1830s, it was in Canada's Nunavut territory. Back then it didn't wander very far, very fast. But in the 1990s, it took off, racing to ever-higher latitudes and crossing the date line in late 2017. In the process, it came to within just a few hundred kilometres of the geographic pole.

Using data from satellites that have measured the evolving shape of Earth's magnetic field over the past 20 years, Dr. Livermore and colleagues have attempted to model the North Magnetic Pole's wanderings.



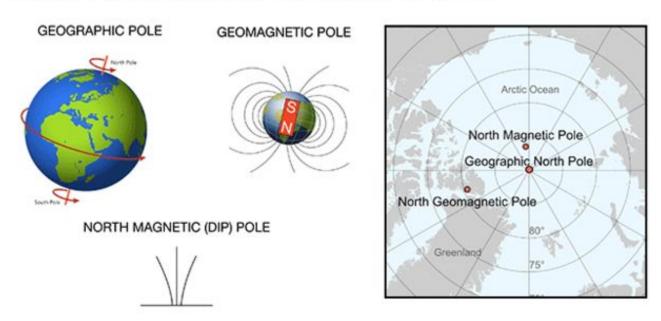


Two years ago when they first presented their ideas at the American Geophysical Union meeting in Washington DC, they suggested there might be a connection with a westward-accelerating jet of molten material in the outer core. But the models were a complex fit and the team has now revised its assessment to align with a different flow regime.

"The jet is tied to quite high northern latitudes and the alteration in the flow in the outer core that's responsible for the change in the position of the pole is actually further south," Dr. Livermore said.

"There's also a timing issue. The jet acceleration occurs in the 2000s, whereas the pole acceleration begins in the 1990s."

Earth: A planet of three distinct north poles



The team's latest modelling indicates the pole will continue to move towards Russia but will in time begin to slow. At top speed, it's been making 50-60km a year.

"Whether or not it will move back again in the future is anyone's guess," the Leeds scientist told BBC News.

The pole's recent race across the top of the world prompted the US National Geophysical Data Center and the British Geological Survey to issue an early update to the World Magnetic Model last year.

This model is a representation of Earth's magnetic field across the entire globe. It is incorporated into all navigation devices, including modern smartphones, to correct for any local compass errors.

Dr. Livermore and colleagues leaned heavily on the data acquired by the European Space Agency's Swarm satellites. The team has published its research in the journal Nature Geoscience.

Jonathan.Amos-INTERNET@bbc.co.uk and follow me on Twitter: @BBCAmos

https://www.bbc.com/news/science-environment-52550973 May 6th 2010

Step aboard a Royal National Lifeboat Institute lifeboat for a virtual tour

https://my.matterport.com/show/?m=ge2qSek3H7X&hr=1&hl=1?utm_source=rnlilife&utm_medium=email&utm_campaign=ke epintouch 2020&utm content=keepintouch9 lookarroundourlifeboat cta

Many Governments Failing Cruise Crew Repatriation: "The challenges in repatriating seafarers on cruise vessels around the world have highlighted the shortcomings of many governments in this worldwide crisis," Lena Dyring, Director of Cruise Operations for the Norwegian Seafarers Union, told Cruise Industry News. "These shortcomings have caused a toxic, compounding domino effect for seafarers who were and still are stuck on cruise ships around the world and caused a lot of human suffering."

Dyring said that first of all she wanted to highlight how Bahamas has acted.

"They have not allowed repatriation from their territory, thus failing their obligations under the Maritime Labour Convention (MLC). They boast that they have 'allowed' the ships to anchor in their waters and have crewmembers





transferring between vessels so they can sail them home. They also boast that storing and provisions have been done in the Bahamas. But to my knowledge, most of these vessels still sail to Miami or Port Everglades for storing and provisions."

According to Dyring, had the Bahamas allowed charter flights out of their territory from day one, there would not have been so many seafarers stuck at sea and a lot of human suffering and uncertainty could have been avoided. To her knowledge, she said, the Bahamas has even denied medical evacuations from vessels registered there.

There are many governments that have failed both their own citizens and their obligations under the MLC, according to Dyring. She said there is a pattern of "over reactions" caused by what she called fear and not facts.

"I also have to highlight the situation in the Philippines where thousands of seafarers have been stuck either on a ship in Manila Bay or in some kind of quarantine situation in Manila for weeks and sometimes months for no apparent reason.

"The Philippine union AMOSUP has done a great job in the middle of all of this, but it is difficult when you have to work against all of these other forces."

Some governments have stepped up and taken responsibility. Dyring mentioned that Barbados, for instance, has taken a vastly different approach to the challenges and have invited the cruise lines to operate charter flights out of their country. Some countries in Europe have also taken their obligations seriously. Dyring said that the UK has stepped up, as well as Germany, Spain and Norway.



"Crew transfer"

June 3rd 2020 https://www.cruiseindustrynews.com/cruise-news/23038-many-governments-failing-cruise-crew-repatriation.html

Read the full article in the *Cruise Industry News Quarterly Magazine* Summer 2020 edition, due out at the end of June.

https://www.cruiseindustrynews.com/cruise-magazine.html

Deck Watch, Quiz 179: The Answers.

- 1. A transmissometer is an instrument used to determine meteorological visibility. It uses a light source (usually a laser) and a detector. Visibility is determined by measuring the proportion of light sent against that received by the detector.
- 2. A nephoscope measures the altitude, direction and velocity of atmospheric clouds
- 3. The anemometer is a device designed to determine the speed and direction of wind.
- 4. A ceilometer measures the height of the cloud base. It uses LIDAR (Light Detection and Ranging) technology that measures distance to a target with laser light and measuring the reflected light with a sensor. Differences in laser return times and wave lengths are used to make digital 3-D representations of the target, in this case the cloud base.
- 5. A wind profiler is a measurement system that uses radar or sound waves to determine the wind speed and direction at various elevations above mean sea level up to the troposphere.
- 6. The disdrometer is a device that can determine the size and speed of raindrops.
- 7. A hygrometer detects and measures humidity and water vapour in the atmosphere.
- 8. The snow gauge measures the water equivalent of an amount of snowfall. It can be equipped with a vertical metric scale read manually, or a remote electronic monitoring system. Snow gauges provide a lot of information about Fraser River freshets.
- 9. The radiosonde is a battery-operated instrument released into the atmosphere usually by a weather balloon that measures atmospheric information and transmits the information back to the ground receiver. Radiosondes are an essential source of data and hundreds are launched daily all over the world.
- 10. The code word for the "Canadian Meteor Service" station was Kurt. It was discovered in 1977 and thought to be a Canadian military installation. In 1981, although the canisters had been opened and the contents strewn about the site, Kurt was taken to Ottawa and is on display at the Canadian War Museum.

Sea Technology May 2020

Have you got half-an-hour to spare? This magazine is over 30 pages long.

https://lsc-pagepro.mydigitalpublication.com/publication/?i=660339&p=1&pp=1&view=issueViewer





Officer shortage to widen and inflate manning costs: The current officer shortfall to crew the global merchant fleet is forecast to widen, despite the dampening effect of Covid-19. This is due to the reduced attractiveness of a career at sea and rising man-berth ratios which will inflate future manning costs, according to the latest Manning Annual Review and Forecast report published by global shipping consultancy Drewry.

Drewry estimates that there is currently a global officer shortage equating to around 2% of overall demand, though presently this is masked by the temporary idling of vessels due to the Covid-19 pandemic. However, once the merchant fleet is fully reactivated this shortfall will re-emerge and represent a tightening of supply conditions compared to 2019 when the market was estimated to be in broad balance.



Looking ahead, despite moderating fleet growth, demand for officers is expected to accelerate due to a revision in anticipated employment practices to extend leave periods and reduce tours of duty, with the resultant impact on man-berth ratios. Meanwhile, net supply of officers has been slowing in recent years and is not expected to keep pace with rising demand, leading to a widening in the overall shortfall relative to merchant shipping's requirements.

"Seafaring is no longer the attractive occupation it once was as competition from shore-based roles intensifies and the lifestyle with

its associated mental health challenges becomes less appealing," said Drewry's senior manning analyst Rhett Harris. "The Covid-19 outbreak has dealt a further blow to the occupation's reputation with high profile news stories of stranded crews and enforced longer tours of duty."

The widening officer shortage is expected to put upward pressure on seafarer remuneration just when shipowners will be under pressure to trim costs in light of weak anticipated earnings. Drewry estimates that overall manning costs have flatlined in 2020 but are set to pick up over the next few years (see chart).

"Further wage pressure will arise to maintain competiveness with shore-based work, particularly following the coronavirus (COVID-19) outbreak which highlighted the health and lifestyle risks of a career at sea. As well as wage rates the overall work life balance dictated by tour lengths and leave rations are expected to become key considerations for employees and employers," added Harris.

Skills and experience for specialist roles remain in demand and are in even tighter supply than the manning market as a whole. There is also likely to be increased demand for seafarers from traditional low cost supply nationalities, which will further add to inflationary manning cost pressures.

"The past few years have seen good industry retention rates and a generally settled employment market. However, ship operators need to beware of officer availability trends and the deteriorating attractiveness of a career at sea. Officers cannot be recruited and trained to gain the experience required in a short period of time," concluded Harris.



Source: Drewry. June 4th 2020.

https://cyprusshippingnews.com/2020/06/04/officer-shortage-to-widen-and-inflate-manning-costs

Taking a new look at mooring safety - Industry insights - DNV GL

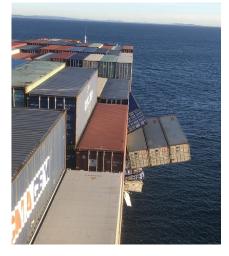
An interesting read.

https://www.dnvgl.com/expert-story/maritime-impact/A-new-look-at-safe-mooring.html?utm_campaign=MA_20Q3_ART_Ind_230_Safe%20mooring_Tan&utm_medium=email&utm_source=Eloqua

Don't blame the weather and APL England. Michael Grey examines issues around extreme weather, container lashings and "reasonable" expectations of the vessel's Master: It was once a simple, almost routine, matter. If you had suffered from heavy weather on passage, whether the ship or her cargo had been damaged, or even lost over the side, you would make the appropriate entries in the logbook and on arrival at port, note protest with the notary public. You would do this even if you suspected there might be damage, thus warding off any subsequent problems.

Heavy weather was not something you could be blamed for; in some trades there was a lot of it about, although in more recent, less trusting times, there will inevitably be some blighter disputing the facts you presented and demanding weather "hindcasts", insinuating that it had not been anything like as wild as you had maintained.

That was then and this is now, and in the event that your cargo has been lost in extreme weather, the Master of the ship may well end up in court facing all sorts of







charges. This indeed was the fate of the Master of the *APL England*, which a couple of weeks ago lost some 50 containers in a storm off the coast of New South Wales. A fair number of these ended up on the beach, and as with the current customs, all will have to be located and salvaged.

A bond of no less than A\$22m has been demanded and one doesn't suppose there will be much change after the salvage has been completed. The Australian authorities have spent the best part of a year recovering the boxes lost in an earlier incident and probably have an idea of the costs involved. The owners of the ship will also face charges.

But once again there has to be professional concern that it is once again the Master of a ship who ends up facing the music after such incidents. In this recent case, the authorities discovered, when the ship arrived in Brisbane, that there were deficiencies in the lashing of the boxes and corrosion in the equipment, which would negate any protests about the extreme weather and the fearsome rolling that displaced the cargo. Case closed – there was somebody to blame and the wretched

Master was the person on the spot, facing everything from pollution to neglect of his duties.



Maybe you can understand the anger and frustration when coastal states have their shores despoiled in such a fashion, especially when it happens more than once and is thus surely foreseeable. There are beautiful beaches on the Dutch Wadden Sea that have containers washing up on them quite regularly. People who see container ships passing close to shore note the ludicrous height of their deck stacks and probably wonder how they are secured. And the truth is that they depend on much the same sort of lashing arrangements that they used on first generation ships half a century ago, when a two high stack was about all they could manage.

There may well be people who will suggest that the height of deck stacks is now quite ridiculous, even though well-equipped modern vessels may "rack" the first four or five boxes above deck level, before piling on another half dozen. And haven't we forgotten the old English law term "reasonable" in what might be expected of the few people aboard a modern containership? Is it reasonable to prosecute a Master because he hasn't managed to inspect every single lashing lug for the onset of corrosion? The APL England was a modest size of vessel these days – but would the Master of the 23,964 teu HMM Algeciras, currently the world's biggest box boat, have the same sort of obligations foisted on him? The answer is of course in the affirmative, but where is the fairness in that?

Michael Grey | Jun 11, 2020. https://www.seatrade-maritime.com/opinions-analysis/dont-blame-weather-and-apl-england

MSC Zoe report says vessel hit the bottom in storm: A 19,200TEU ship, which lost 342 containers in a North Sea storm, hit the seabed as the vessel was tossed up and down in heavy seas according to a report into the MSC Zoe incident published on 25 June.

Dutch Safety Board (OVV) investigations, carried out with input from Germany's BSU and the Panamanian registry reported the storm conditions were not particularly severe, but that the northwesterly winds that were blowing on the day of the incident in January 2019, meant that the waves were steep and the forces impacting on the cargo containers were massive. According to the OVV report *MSC Zoe* was sailing to Bremerhaven on the southern route above the North Sea's Wadden Islands. The depth of the water is less in this region than the longer northern route, but the report concludes that while the northern route is safer than the shorter southern transit, it remains a difficult path to navigate in the conditions encountered by *MSC Zoe* on the night of the accident.

As the wide design of the vessel makes it highly stable, rolling will mean that the vessel will roll back to upright quicker than less stable vessels, and with the wave intervals at about the same period of the rolling motion of the ship the forces acting on the lashing equipment are increased further.

"Even though this may sound counterintuitive, this means that large and wide container ships with a high stability have greater roll motions in a beam wave scenario than less stable ships. In addition, a high stability also leads to the effect that the ship wants to return fast to its steady state. This leads to high accelerations and hence large forces on containers and the lashing material on board. The occurrence of contact with the seabed, green water and slamming can further amplify these accelerations and/or forces," the report explains.

It is less likely that vessels will hit the seabed on the northern route which has deeper water, however, OVV said the "investigation has revealed risks of loss of containers for large, wide container ships on [both] the shipping routes to the north of the Wadden Islands".

The MSC Zoe investigation concluded that, "The northerly shipping route is from the perspective of container loss not a safe route, at most a less risky route during northwesterly storm conditions. In different conditions the southern route may be less risky."

Investigators went on to say, "Hydrodynamic phenomena and ship behaviour in shallow shipping routes such as those above the Wadden Islands have only been subjected to limited scientific study. Further research is necessary in order to map out the risks on both shipping routes in other conditions and/or for other ship sizes and types."





However, the investigation conceded that currently there were no specific guidelines or restrictions for large container ships operating in the comparatively shallow waters to the north of the environmentally sensitive region on the Wadden Islands. A further admission that "the shipping industry has not established links between the characteristics of large container ships, the specific circumstances to the north of the Wadden Islands," may see changes to the guidelines as a result of the MSC Zoe accident and pollution.

The Swiss-based carrier said in a statement, "After the incident, MSC made its own decision to avoid the southern sailing route for subsequent voyages and we will continue to follow official guidance on designated container shipping routes in the North Sea, if and when such guidance evolves." MSC added it has noted the conclusions of the combined report by OVV, Panama, Germany and the Netherlands, and that the company has fully co-operated with the investigation and is committed to minimising the risk of similar accidents in the future. Read the full report here.

Nick Savvides. Managing Editor. June 25th 2020. https://container-news.com/msc-zoe-report-says-vessel-hit-the-bottom-in-storm/



Environmental damage was extensive following the loss of 342 containers from the 19,200TEU vessel MSC Zoe in January 2019



Aerial photo provided by the Central Command for Maritime Emergencies Germany shows container vessel MSC ZOE near the German North Sea island of Borkum

https://www.dailysabah.com/europe/2019/01/03/dutch-islanders-strike-gold-after-cargo-ships-lost-containers-wash-ashore

Loss of containers overboard. MAIB Report

Location: North Pacific Ocean. Published 16 January 2020

From: Marine Accident Investigation Branch Date of occurrence: 20 January 2018

Vessel type: Merchant vessel 100 gross tons or over

Report type: Investigation report

Accident Investigation Report 2/2020 Investigation report into marine accident including what happened, safety lessons

learned and recommendations: -

MAIB investigation report 2-2020: CMA CGM G. Washington

Annexes to MAIB investigation report 2-2020: CMA CGM G. Washington

Summary: At about 0127 on 20 January 2018, the then UK flagged container ship CMA CGM G. Washington unexpectedly rolled 20° to starboard, paused for several seconds, then rolled 20° to port. The ship was experiencing very heavy seas in the North Pacific Ocean while on passage from Xiamen, China to Los Angeles, USA. In daylight the following morning, the crew found that three container bays had collapsed, with 137 containers lost overboard and a further 85 damaged.

Read the report at: https://www.gov.uk/maib-reports/loss-of-cargo-containers-overboard-from-container-ship-cma-cgm-g-washington

New President of The Nautical Institute to focus on three challenges: The newly elected President of The Nautical Institute, Jillian Carson-Jackson has vowed to help the Institute and wider maritime community meet three important challenges - those of diversity and inclusion, branch engagement and managing the impact of technology.

Speaking at today's Nautical Institute Annual General Meeting she announced a pledge from the Institute on diversity and inclusion saying: "There has been a concerted effort over the past years to raise visibility of not just women, but the overall role of diversity and inclusion in maritime. The pledge of the Institute, as a global body for maritime professionals, is to show its commitment to encourage, support and celebrate a diverse and inclusive maritime industry."

Championing the Institute's worldwide network of branches Ms. Carson-Jackson described her own branch, The Nautical Institute South East Australia branch, as her professional family, sounding board and reality check. commented, "Nautical Institute branches provide a focus to engage with other maritime professionals and to think global





while acting local. They offer a forum to gather ideas, share experiences, develop best practice and influence the activity of the Institute and beyond.



On the subject of technology, Ms. Carson-Jackson cautioned that in a fast-changing environment "it may be difficult to see beyond the tools to the people. As we see the increase in technology in our industry, our challenge is to consider the changing skill sets and competencies required for maritime professionals in an increasingly digital and autonomous environment."

Jillian Carson-Jackson, FNI, FRIN commenced her career in the Canadian Coast Guard, graduating from the Canadian Coast Guard College as a navigation officer. With over three decades in the industry, Jillian has worked both afloat and ashore in the CCG, including 10 years as an instructor at the CCGC. Following an active role at IALA in the development of VTS Training, she moved to France to work with IALA as Technical Coordination Manager. She then moved to Australia to work with the Australian Maritime Safety Authority (AMSA) as Manager of Vessel Traffic and Pilotage Services.

In 2016 Jillian left AMSA to set up her own consultancy, focusing on maritime technical advice and education. In May 2020 Jillian was appointed a Director of GlobalMET. Jillian represents The Nautical Institute at IALA as chair of the Emerging Digital Technologies Working Group (ENAV Committee) and the Personnel and Training Working Group (VTS Committee).

Ship Management International. JULY 2, 2020. http://shipmanagementinternational.com/

MOL leads consortium to test unmanned vessels this year: JAPAN's Mitsui OSK Lines (MOL) has announced that two of its group and other consortium members have applied to the Nippon Foundation to fund demonstration voyages to test autonomous sailing this year.

In cooperation with Mitsui E&S Shipbuilding and Furuno Electric, the MOL has been developing technologies for autonomous sailing, and plans to conduct demonstration voyages from unberthing to berthing.

The demonstration voyages will be conducted with an MOL Ferry and a coastal containership owned by Imoto Lines, using cognitive technology of ship handling for avoidance and auto berthing.

In addition, mooring support technology using a drone will be introduced in the demonstration voyage of the coastal containership.

MOL will oversee the entire programme and conduct risk assessments, drawing upon its accumulated expertise in ship operations management.

MOL is working to realise autonomous vessels to achieve further enhancement of safe operation by using new underlying technologies and reduction of crewmembers' workload, said MOL.

SeaNews Turkey. June 28th 2020. https://www.seanews.com.tr/mol-leads-consortium-to-test-unmanned-vessels-this-year/186977/

OCEAN VOYAGE INSTITUTE COLLECTS OVER 100 TONS OF PLASTICS IN LARGEST-EVER



OPEN OCEAN CLEANUP: Ocean Voyages Institute's marine plastic recovery vessel, S/V Kwai, has returned from a 48-day expedition where it successfully removed 103 tons of fishing nets and consumer plastics from the North Pacific Subtropical Convergence Zone, more commonly known as the Great Pacific Garbage Patch or Gyre. The expedition has set a new record for the largest at sea cleanup in the Gyre to date, more than doubling its own results from last **CHAMBER** year. COS Weekly Newsletter: July 3rd 2020



In June, the BC Branch of The Nautical Institute had the pleasure of delivering cheques and certificates to 10 Nautical Science Cadets from the BCIT Marine Campus. The awards came from the Vancouver Transportation Foundation and the recipients were: Tyler Gagnon, Alex Gould, Noah Hendricks, Nelson Hill, Gurkirat Mangat, Lauren



OF SHIPPING

McAughren, Ashley Obeck, Nicole Pickering, Mael Pronovost and Adam Sirk.

Because of the COVID-19 situation we were unable to make the presentations in person. Since 2014 the Vancouver Transportation Foundation has provided \$45,250 for Scholarships.







The ARKLOW FUTURE navigating the Dutch coastal waters during a Southwesterly gale.

Photo: Flying Focus Aerial Photography www.flyingfocus.nl ©

2020 IS ACTUALLY THE YEAR OF THE RAT.

- · We are all in hiding.
- · We only come out to get food.
- We store the food in our homes to eat later.
- And we run away when people come close to us.



I asked Alexa what
the weather
was going to be like
today..
Her response was:
"What does it
matter?
You are not going
anywhere."

Do you wish to make a financial contribution to the Society? Is it time for you to renew your membership? The Annual Membership Fee remains at \$40.00 but any amount that you can donate will be greatly appreciated.

Please make your cheque payable to the NPESC and mail it to: -Nautical Professional Education Society of Canada, 3648 Glenview Crescent, North Vancouver, B.C. V7R 3E8 Thank you.

Contributions to the NPESC are tax deductible. Charitable Registration # 1039049-20



Articles or comments for inclusion in future editions of Seatimes can be sent to me at whitknit@telus.net David Whitaker FNI

