



NAVAL ASSOCIATION OF CANADA
ASSOCIATION NAVALE DU CANADA

SOUNDINGS

PATRON H.R.H. THE PRINCE PHILIP
DUKE OF EDINBURGH

THE NAVAL ASSOCIATION OF CANADA - OTTAWA
C/O HMCS *Bytown*, 78 Lisgar Street, Ottawa, Ontario K2P 0C1
<https://nac-o.wildapricot.org/soundings>

First Objective in Ottawa Branch Bylaws:

“Make all levels of Government and the general public clearly aware of the vital need for, and value of adequate and effective Maritime defence forces to protect and further the interests of Canada.”

56.01

“Trying the depth of the water and the quality of the bottom line....”

May 2020



Royal Canadian Sea Cadets of the Navy League of Canada compete in a sailing regatta. The year 2020 is the 125th anniversary of the League. See the cover story starting on page 6.





From the President

By Barry Walker

The Spring 2020 edition of Soundings comes to you through the hard work of **Richard Archer** who has spent many hours cajoling authors and putting together the magazine you are now



reading. For Richard, this truly is a labour of love - at least it must be since he continues to volunteer to do this without recompense.

However, he cannot do it all alone, so I will repeat my previous entreaties for you to consider taking up your pens or keyboards to contribute articles for future publication. All contributions will be gratefully received and considered.

The time has come when NAC National Office seeks nominations for our various awards: Gold, Silver and Bronze medallions, and Certificates of Appreciation. The criteria for each award are listed on the national NAC website, and should be addressed to NAC-Ottawa Director-at-Large **Steve King** at seking@outlook.com.

I recently had the pleasure of presenting two cheques to the Royal Canadian Sea Cadet Education Fund. One cheque represented the grant from the NAC Endowment Fund, and the second represented funds from you, our branch members. These funds will provide three to five scholarships to deserving Sea Cadets this year. I mention this to remind you that we are again seeking candidate projects that are worthy of funding from the Endowment Fund, and I invite you to discuss your nominations with Branch Past President **Howard Smith** at h.smith@lansdowne.com.

I'm sorry to announce that a stalwart member of the Board, **Paul Baiden**, intends to step down this year. Paul has been our Director for Member Services, and has engaged in numerous activities dealing with pension reform and relations with, among others, Veterans Affairs Canada and the National Association of Federal Retirees. This work is interesting and challenging, and I invite you to consider if you could fill Paul's shoes in the future.

COVID-19 and the Battle of the Atlantic Gala and Conference

Normally at this time of year, we would be looking forward to the Battle of the Atlantic Gala Dinner. Unfortunately, due to the ongoing public health emergency we have had to postpone the Gala along with the NAC Conference and AGM to a later date. All being well, we will seek a date in October, around the time that the RCN celebrates *Niobe Day*.

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The COVID-19 virus is also affecting the normal activities of the Ottawa Branch. We have cancelled the April Speaker's Evening scheduled for April 6th, and, due to the closure of the *Bytown* Naval Officers' Mess, we are unable to meet for our informal Wednesday lunches.

Throughout these difficult days, I am grateful for the ongoing support of our NAC sponsors and partners who have made it possible to offer this year's program so far, and who have promised to continue to support us in the future. **BAE Systems Canada** has been the major sponsor in this program year, covering the costs of our monthly meetings at HMCS *Bytown*.

Naval Promotions, Retirements and Appointments

On 16th March, the CDS promulgated the 2020 Senior Officer Promotions and Appointments List. I'd like to mention those appointments which are of interest to the NAC.

VAdm Darren Hawco will retire this year, and this causes a number of moves, including the appointment of **RAdm Craig Baines** as the Deputy Vice-Chief of the Defence Staff. **RAdm Brian Santarpia** will replace RAdm Baines as Commander, Maritime Forces Atlantic.

Cmdre Craig Skjerpen will be appointed Chief of Staff at CF Intelligence Command, resulting in the promotion of **Capt(N) David Patchell** to Cmdre(AWSE), and his appointment as DG Naval Strategic Readiness.

RAdm Luc Cassivi will retire.

Cmdre Rebecca Patterson will be appointed Commander, CF Health Services Group.

RAdm Simon Page has already retired and taken up a civilian position as Associate ADM(Materiel). This move results in the following changes. **Cmdre Chris Earl** was promoted RAdm, and appointed as Chief of Staff ADM(Materiel). **Cmdre Lou Carosielli** will be appointed DG Maritime Equipment Program Management. **Capt(N) R. C. Gray** will be promoted Cmdre (AWSE) and appointed as Project Manager, Canadian Surface Combatant.

Cmdre Jeff Hamilton will be appointed Chief of Staff Readiness, Canadian Joint Operations Command.

Capt(N) Steve Thornton will be promoted Cmdre and will be appointed Director General Defence Force Planning.

Cmdre Josée Kurtz will be appointed Commander National Cadet and Junior Canadian Rangers Support Group.

RAdm Jeff Zwick will be appointed to a one-year temporary assignment as Chief Strong Secure and Engaged Combat Systems Implementation.

Capt(N) Matt Bowen will be promoted Cmdre(AWSE) and will be appointed as the J7 to United States Cyber Command.

Cmdre Genevieve Bernatchez will be promoted RAdm and will remain as Canadian Armed Forces Judge Advocate General.

Cmdre Bradley Peats will deploy as Commander Standing NATO Maritime Group.





Capt(N) Dan Charlebois will be promoted Cmdre and will deploy as Commander Combined Task Force 150

On behalf of NAC-Ottawa, I offer congratulations to all for their service and continuing commitment to Canada and the RCN.

Finally, I want to wish you all a safe time of social distancing. We are living in very interesting and confusing times, and NAC-Ottawa must also adapt. In the event of prolonged mess closure, we will provide you with online access to future speakers' evenings.

Yours Aye,
Barry Walker

Branch Membership and Web Site Update

By Gerry Powell

I hope that everyone is coping well with the demands of our current lifestyle and routines to contain the COVID-19 pandemic, and that you're staying safe and keeping healthy. The Branch membership renewal campaign for 2020 is now over and, while there are still a few to be initiated, the membership is strong and we continue to prepare for the future with our Membership Management System.

With the various gains and losses following the edition of *Soundings* last Fall (including, sadly, the passing of one more comrade for a total of ten that crossed the bar in 2019), we finished the last calendar year with 413 members. That reflected a small net gain in our complement, driven by a notable increase in the number of RMC Naval Cadets and Introductory Members.

2020 Membership

Branch membership for 2020, at this point, stands at 407 members. A more detailed breakdown of the membership over the last few years is provided in the table below. Regular members combined currently form a 64% proportion of our membership, while the numbers of Honorary & Lifetime members continue to decline gradually. Sadly again, another member who had been with us for many years has passed away since the start of the year. The proportion of Introductory Members plus Naval Cadets has moved up to 23%. Ideally, many will remain with us, or later return as future members.

As noted last year, the Branch membership state is a dynamic value and reflects a balance stemming from our renewal and recruiting efforts to offset departures – all affecting our membership strength in the longer term.

NAC-OTTAWA MEMBERSHIP DATA									
	2013	2014	2015	2016	2017	2018	2019	2020 (as of 8 Apr)	
Honourary/Life Paid Members	80	73	67	60	50	46	40	39	9.6%
Regular (local)	173	197	208	228	226	216	193	189	46.4%
Regular (Out of Town)	51	58	60	68	69	60	56	54	13.3%
Regular (Serving)	22	20	28	38	34	28	29	29	7.1%
Regular (Spouse)	7	7	6	5	5	4	2	2	0.5%
Introductory Members	22	6	5	13	0	3	10	11	2.7%
Naval Cadets (at RMC)		19	37	54	49	49	83	83	20.4%
TOTALS	355	380	411	466	433	406	413	407	100%





2020 Membership Renewal

The 2020 Membership Renewal Campaign has proven very successful this year with a 95% completion rate at the end of March. About half were fulfilled prior to the start of the New Year, and the other half since. Only 20 remain overdue –most of whom will likely renew once we overcome certain connection and staffing issues. Overall, this was remarkable, as we traditionally end the campaign around 80% with three times as many yet to respond! A heartfelt appreciation goes out to all members in having made this outcome possible!

Several factors that contributed to that success, and some observations, will be considered in planning for next year's campaign:

- It was clear that members were more capable and confident using the online renewal process this year. It is the preferred approach for a number of reasons, particularly as it includes a review of a member's profile.
- Profiles were generally more up-to-date and connectivity was better.
- Almost half of the renewals took advantage of a manual initiation offered by the Membership Director, as it can both simplify and expedite the renewal process by creating "invoices" to be settled in lieu of the usual fully online approach. While simple to do, with many members it can still add up in time and effort.
- Thus the fully online process remains the preferred option, but next year the Branch will likely use an automated approach to manually-initiated renewals with invoices at some point during the campaign.
- Lastly, a greater number of members who were not renewing announced their intention early. While only ten in number so far this year, it reduces unnecessary outreach efforts and allows a more accurate measure of renewal tracking.

Efforts to complete the renewal process for the remaining few will continue with directed outreach efforts during April. In keeping with the aim of tightening up on the renewal milestones, those not having indicated intentions otherwise will be "invoiced". In the absence of a response, members still overdue in May will be assigned a "LAPSED" status, which restricts membership privileges. Those still unresolved by June may be suspended.

Membership Initiatives and the Ottawa Branch Website

While the Ottawa Branch continues to enjoy a strong and stable membership, such is not the case for all Branches. There are a number of ideas that have been under discussion for some time to improve the attractiveness of the Association to a younger and more modern potential audience, and encourage growth in membership. A few of these ideas are getting further consideration now, and they may allow for a more centralized Membership Management System that meets the needs of all Branches. But each Branch has a unique set of geographical and social circumstances that challenge a common approach by all, so work to find a consensus is ongoing. Mechanisms for cost and revenue coordination also need to be agreed upon.

The Ottawa Branch transition to an online Membership Management System three years ago may form the basis for such a system. Along those lines, work is underway to develop our site so that it can serve other users as well. Since last Fall this development has been largely invisible work in the web site's back plane. In February, however, it was necessary to move it into the forefront.

For Ottawa Branch members, this means that the features for ourselves that we used to access from across the main menu, are now all delivered on a Branch specific menu under "Branches" - as circled in the picture on the next page. The Ottawa Branch features remain as complete and current as always, but located there instead. Each other Branch, if and when it joins, will have its own submenu there with its tailored content that only the relevant Branch members will see.





Naval Association of Canada Association Navale du Canada

OTTAWA BRANCH

(MEMBER Pages are NOT accessible to the Public)

Home **Branches** NAC National Members Publications Contact

Gerard Powell

Enter search string

The rest of the main menu will provide common or shared content, or material provided by National, for all branches and members. That will involve some standard procedures, still under development, to be applied by each Branch. This work will likely continue for several weeks. Your patience is appreciated.

Ideas for features to incorporate on the website are always welcome! If there are any questions or concerns with your membership support, on or offline, please send me a note by email at naco.membership@gmail.com, or to our mailing address as shown on the *Soundings* cover. **S**

The Navy League of Canada: An Anchor for Communities

By Tamara Condie and Marc Viau

In 1895, 125 years ago, the British-based “Navy League” established a Toronto branch, which marked the official inauguration of the Navy League of Canada.

Originally, the British Navy League was conceived as a response to the increasing aggression of the German Empire in the latter half of the 19th century. The League’s intrinsic objective was to ensure adequate naval defence for the British Empire, and so nearing the end of the 19th century, branches of the Navy League began to emerge abroad at an exponential rate, one of which at the time was the incorporation of the Toronto branch, with a warrant dated December 16th, 1895. This warrant now resides in the NLOC national office in Ottawa, Ontario. In due course other branches were established across Canada, including the Ottawa Branch established in 1924.

The political turmoil that prevailed globally in 1895 resulted in the perceived need for a naval reserve training program in Canada. In response, the nascent NLOC prepared a submission to the Canadian government for such a program as an ingredient in a more robust maritime defence policy. The NLOC’s devoted efforts in support of maritime defence of the empire helped the government in its early development of Canada’s naval policy. The direct result was the establishment of the Canadian Naval Service in 1910, the immediate predecessor of the Royal Canadian Navy (RCN).

Although the NLOC’s objectives have evolved over time, it has remained loyal to its philosophical roots, which embody the betterment and promotion of youth programs and



▲ *Inspired by a design from Master Seaman Tarnveer Takhtar from RCSCC Ajax in Guelph, Ontario, the Navy League of Canada’s commemorative logo embodies the League’s place as an anchor to communities across the country, from coast to coast to coast, since 1895.*





maritime security throughout Canada. In 2020, the NLOC proudly commences a celebration of its rich history and the exceptional volunteers, community members, and staff who have contributed to maintaining the organization's success throughout the years.

In the early years, NLOC branches informally supported a youth training program angled towards fundamental training in citizenship and seamanship, thus encouraging young men to enter a seafaring career.



During the First World War, the Canadian government depended heavily on the support of the NLOC. The organization provided support through the recruitment of naval and merchant navy personnel, operation of hostels for seafaring personnel, welfare services to the dependents of seamen and, in the final stages, rehabilitation services for naval veterans. When the war ended, the NLOC continued its unwavering dedication to providing support for the maritime community. For example, it maintained shore hostel facilities for the benefit of seafarers, and training was formalized across the country through the organization of Boys' Naval Brigades. To allow for the infusion of funds from the Department of the Militia, these brigades were later modified to become the Navy League Sea Cadets. The NLOC also inaugurated its Canadian maritime affairs portfolio, leading to the development of far reaching ideas for the maritime defence of Canada.

With the outbreak of the Second World War, the NLOC assumed similar responsibilities to those it had developed in WWI. The organization profoundly expanded its role as a "Nursery of Seamen" through the deliverance of 24 hostels in various port areas and the provision of amenities for visiting seamen, including those of the RCN and Canadian Merchant Navy.

But as the war approached its end, the objectives of the NLOC deviated slightly from what they had been for the first half of the 20th century. In the latter part of the 1940s, the organization made a conscious effort to revamp its support of youth training and promoting the





knowledge of maritime affairs throughout Canada. Included in this revitalization, King George VI bestowed the “Royal” nomenclature on the sea cadet corps. The entry age for this Royal Canadian Sea Cadet program had been set at 14 years (later reduced to 12), but this was limiting to those younger boys who wanted the chance to develop indispensable skills to become upstanding citizens and succeed in future endeavours. In 1948, therefore, NLOC established the Navy League Cadet Corps for younger boys aged 9-12. Shortly thereafter in 1950, the Navy League Wrenette Corps for young ladies was also established, which has since become integrated with the Sea Cadet and Navy League Cadet Corps.

Today, across Canada there are 8,000 Royal Canadian Sea Cadets in 261 Corps, and 3,200 Navy League Cadet Corps Cadets in 110 Corps. In the Nation’s Capital, the Ottawa Branch proudly administers two of the largest Cadet Corps in Canada: RCSCC *Falkland* and NLCC *VAdm Kingsmill*. Additionally, the NLOC Kanata Branch supports RCSCC *Centurion*. All Corps are visibly active in



the community, from distributing gifts and Christmas cards to veterans at the Perley-Rideau Veterans Health Care Centre, to participating in the Remembrance Day wreath-laying ceremonies at the national and local war memorials, and everything in between.

The League also continues its support for Maritime Affairs awareness with regular major Maritime Security Conferences and directed efforts. An example is the time it participated with the Naval Association of Canada in the public deliberations leading to the start of the Naval Shipbuilding Strategy, advancing the need for a strong Royal Canadian Navy.

Always encouraged by the success and enduring growth of all its cadets at every level, NLOC’s Ottawa Branch is looking forward to its 100th anniversary in 2024, and to continuing to help guide Canada’s future leaders for another 100 years to come.

In its 125th year of service throughout the nation, the Navy League of Canada proudly recognizes the outstanding accomplishments of its members – both past and current – and is eternally grateful to them for their selfless support of its objectives. Here’s to the next 125 years!

Tamara Condie is currently a fourth-year journalism student at the University of Ottawa, and works part-time as a communications assistant at the National Office for the Navy League of Canada, where she leads the 125th Anniversary campaign.

Marc Viau is the Director of Communications for the Navy League of Canada’s Ottawa Branch. **S**





Genius

By Richard Archer

A slightly edited version of this article was first published in Starshell. The article is based largely on my own memories and on my own opinions.

It is my privilege to have a genius as an RMC classmate, as a fellow member of NAC-Ottawa, and as a friend. He is Captain(N) (Ret'd) James Carruthers, PhD., P.Eng., RCN, and I don't use the term *genius* lightly.

History tells us that there are many degrees of recognized human genius, but they all have one thing in common: the geniuses have all precipitated *a radical change in perspective*. In short, each turns his own particular genre on its ear. Sometimes this change in perspective is confined to the genius's own field of endeavour; sometimes it affects everyone. Newton, Darwin, Einstein and Jobs are examples.

To be clear, I'm not suggesting that my friend Jim Carruthers is in the same category as these four historical figures, but he is a genius nonetheless. He certainly meets the criterion of having used his brilliance to engender a radical change in perspective in his own field of endeavour.

Jim should never have been accepted into the Navy – due to failing French he hadn't yet graduated from high school, and he was designated a “two-percenter”, someone who didn't meet the medical requirements for eyesight. But he did so well on IQ and aptitude tests, off he was sent to Royal Roads.

After Jim graduated from RMC in 1965 with an electrical engineering degree, the Navy didn't seem to know what to do with this young, electronics-astute junior officer. Because the Navy hadn't yet invented the classification of Combat Systems Engineer, he initially spent his first years without a real posting. Even though he was nominally posted to NDHQ he spent most of his time on board HMCS *Terra Nova*, then in the process of its conversion to the Improved *Restigouche* class. He led the design and implementation of new systems like ASROC and the SQS 505 hull-mounted and variable-depth sonars, and perhaps most significantly, the development of the first digital computer system to go to sea in the RCN.

At this time he made his first observations as to how the various shipboard departments operated in virtual silos – between operations and weapons officers, operators and maintainers, and even between systems like the bridge, action information, ASW, gunnery and electronic warfare. Industry involved in naval combat systems also operated in similar silos, as they worked to protect market shares. He realized that in those days all navies operated under this weakness.

The Canadian Navy was smart enough to use his evident expertise in electronics to good effect in a number of tasks. Although the Navy had no formal training for him except for some *ad hoc* stints at USN schools, he was actually a (or perhaps *the*) prototype for what would eventually be called the Combat Systems Engineer.

In the early 1970s, Jim decided to upgrade his qualifications. He was accepted by Nova Scotia Tech for a combined Masters and PhD in electrical engineering, which as the school acknowledged, he completed in record time.

He was assigned as design authority for the Automated Data Link Information System (ADLIPS), a system added to the operations rooms of the older steamers so they could communicate and share information tactically with the newer ships like the DDH 280 class, which were then coming into service, along with our USN allies. This led inevitably to him becoming the lead for the naval technical staff's longer range plan for moving beyond the 280 combat systems. In those days, all navies had similar approaches to combat system design – build the necessary information and control capability around a single large computer with separate, dedicated control consoles for elements such as gunnery, missiles and electronic warfare. Other extant examples were the USN's Naval Tactical Data System (NTDS – which had some significant Canadian gestation) and the RN's Action Data Automated Weapons System (ADAWS). In NDHQ, the new plan to go beyond such approaches was called Shipboard Action

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Information System (SAILS). The idea was to use emerging digital data handling techniques to be able to share information and control equipment more efficiently, with more damage resistance and more flexibility. There was no stated operational requirement other than a call to “update” CCS 280, but if feasible, it was to be retro-fitted into the 280s and to be the system installed in the Canadian Patrol Frigate, a project that would come to fruition in the mid-1980s. The job was given to Jim, and he set to work. He soon realized that with SAILS, there was no intent to go beyond the then-current approach – each component would use the computing power of a large central processor but would still operate stand-alone, without connections to other systems.

To re-use a phrase, Jim turned the world of shipboard system design on its ear. In a radical departure from his assigned brief and acting alone, instead of a single large centralized processor he developed a concept whereby all data processing would be distributed; that is, each component would have its own one or more smaller processors that would not only do the work required, but also facilitate the sharing of information and control amongst all users and the command. The crucial contributor would be a redundant “time division multiple access “ data bus laid throughout the ship for all systems to link with, each via a separate bus computer, with this bus being the means to share and manipulate the information and control. The data bus refined the way that “packets” of data and instructions were shared amongst all possible users. A crucial consequence is that ship designers could do away with tonnes and kilometres of wiring between systems. But most importantly, the concept eliminated all the silos.

Around this time, I was leading an NDHQ delegation to a special working group of the NATO Naval Armaments Group at NATO HQ in Brussels. I was chatting with a Royal Navy delegate, and he said he’d just returned from a visit to Ottawa, where he had been given a tour of Jim’s concept demonstration set-up, where among other capabilities the data from multiple sources could be displayed on the same screen. Now, I had heard stories of what was going on in Jim’s lab, and so I said, “I hear that he’s years ahead of anyone else.” “No,” said the Brit, “not years, decades.”

The new concept was renamed Shipboard Integrated Processing and Display System, or SHINPADS for short. Note that the name does not refer solely to a ship’s combat system. It was clearly a concept that applied to all shipboard data systems, including marine engineering and even administration.

Jim tells the story that he was having trouble convincing Canadian authorities to believe it could be done, and getting funding to build on the success to date. At that time he travelled to the US to brief the USN on what was being accomplished. Apparently, the chair of that briefing, the Assistant Secretary of the Navy for Research and Development, subsequently telephoned his counterpart in NDHQ, and said something like, “If you don’t fully fund this work, we will...and then take it over!” Jim got his Canadian funding. In due course his concept found its way into the 280s and the CPF. It changed forever the way that combat system designers approached the requirements and exploited the latest cyber technologies. The SHINPADS methodology was also adopted amongst other NATO navies, and it became the more-or-less world standard.

But Jim’s genius and his propensity for initiating radical change hasn’t ended there. In the 1980s as a naval captain he retired from the Navy, and took up an engineering position with a mid-size electronics design company in the Ottawa suburbs called Norpak Corporation. The company specialized in the standards and techniques for embedding digital data in the typical North American television analogue transmissions. This allowed capabilities like close captioning and the V-Chip. For television, Norpak also pioneered Videotex and Teletext. It wasn’t long before the company began to exploit a new technology called the Internet. In quick time Jim was made a Vice-President and then the Chief Executive Officer of the company, a position he held for 25 years.

But where did any radical change enter this picture? Well, when Jim arrived at Norpak it was going through some major problems with management and cash flow. In time it was facing bankruptcy. What he did as CEO was to convince the shareholders that the survival of Norpak could be achieved with a lot fewer people. He initiated a program that eventually reduced the





work force to about ten percent of the original, which significantly increased overall productivity. He also reduced the product line to focus on profit-makers. The commercial success blossomed...and he made the shareholders a tonne of money.

At the same time he became engaged in the machinations of the Royal Military College. Not surprisingly he had a radical vision for the college – to make it into a world-recognized centre of research and education in the field of *leadership*. To this end he joined the board of the RMC Foundation so as to make his case for this vision, but on this occasion it was to no avail. Even so, he put his own money where his mouth was, and along with classmate and fellow PhD Keith Ambachtsheer, he launched a Class of '65 fund to support an RMC professorship in leadership, which is still ongoing. Secondly, an annual award was endowed to recognize overall teaching excellence by an individual RMC professor. Many other Class of '65 members also contributed, and continue to do so, and at one time the accumulated capital was the largest of any of the class-supported funds.

And speaking of RMC, Jim is famous for supporting individual cadets. He started with financially supporting cadet candidates from his hometown of Drumheller, AB, and now actively supports the involvement of all cadets in a wide range of activities. His latest initiative? He is arguing for the greater exposure of nominally naval cadets to all things RCN, so that they don't show up as a brand-new sub-lieutenant in a ship without ever seeing one before. To facilitate the naval education of RCN cadets, he arranged for them to be members of the Ottawa Branch of the Naval Association of Canada (NAC), and included them in a periodic Internet newsletter originally intended for the edification of all NAC members. This newsletter builds upon his own persona as an information-guru, and distributes navy-related intelligence from around the world. He has now passed on the reins of the newsletter to someone else but it is still going strong and even growing.

And speaking of NAC, Jim saw the need for a new organization in Canada to be a medium for debate on naval issues, and to be the go-to source for media and academia for expert opinion on the way ahead for Canada as a burgeoning maritime nation. The model would be the US Naval Institute. His first moves were to try to amalgamate the then-Naval Officers Association of Canada (NOAC) with the maritime affairs arm of the Navy League of Canada (NLOC), along with some other like-minded organizations. But for its own reasons the NLOC demurred. So Jim turned his sights on the NOAC. He joined the Board of the Ottawa Branch, and in due course was elected Branch President. He campaigned for the branch to throw off its old ways of thinking about itself, and to take steps to re-make itself less as a vehicle for old salts to enjoy some camaraderie, and more of an advocate for the Navy.

But the branch did not have enough power to make such changes, and so Jim set himself up to be elected to the presidency of the national NOAC. Here he had some real potency to make changes. The first thing to do was to drop the "O" from NOAC and open up the association to anyone with an interest in things maritime in general and the aspirations of the RCN in particular. Next he worked on gaining the necessary funding, and first expanded the annual general meeting into an opportunity for serious conferences, with fees for attending, on the naval issues of the day. A second initiative was to launch an annual Battle of the Atlantic Gala, held at the National War Museum in Ottawa and attended by politicians and other senior authorities. Along with the naval conferences, and as well as properly commemorating the success of naval and merchant marine veterans, these initiatives made some significant profits that could be turned to education in the need for a capable and efficient RCN. This education is being applied to both the people of influence and to the general public.

He has now turned over the reins of the presidency to his successors, but the legacy of Jim's brilliance, vision and enterprise for radically changing people's perspective – his genius -- continues in today's Naval Association of Canada.





Postscript

After my first draft of this account of the genius of Jim Carruthers, I returned to the book I was reading -- I had almost finished it. It is by the Israeli historian/futurist/philosopher Yuval Noah Harari. The book is called *Homo Deus: A Brief History of Tomorrow*. [Signal (McClellan & Stewart), 2017] It is one of a series of three Harari books, the others that I have read being called, *Sapiens: A Brief History of Humankind*, and finally, *21 Lessons for the 21st Century*. They are full of entertaining insight and enlightenment – highly recommended.

In the last chapter of *Homo Deus*, Harari describes the present-day “religion” of data – how advocates called “Dataists” are arguing for the complete freedom and unconstrained sharing of all forms of data and information as a way for humankind to shake off its current restrictions and move into a new, better future (bear with me). Such Dataists explain history in terms of algorithms and data-processing systems. For example, the battle between liberal capitalist democracy and communism wasn’t won by democracy because it is morally superior. It won because it follows a superior data-processing concept. While in communism all information flows to a central authority, say in Moscow, where all economic and political decisions are made, conversely under capitalism the information control and decision-making are entirely *distributed* – amongst individual enterprises and the free market. Hence, in a data-processing context capitalism is much more efficient...and thus prevailed in the Cold War.

Under the rubric “History in a Nutshell” Harari goes on to apply this concept to all human history from the cognitive revolution onwards, and I quote:

From a Dataist perspective, we may interpret the entire human species as a single data-processing system, with individual humans serving as its chips. If so, we can also understand the whole of history as a process of improving the efficiency of this system through four basic methods:

► **Increasing the number of processors.** A city of 100,000 people has more computing power than a village of 1,000 people.

► **Increasing the variety of processors.** Different processors may use diverse ways to calculate and analyse data. Using several kinds of processors in a single system may therefore increase its dynamism and creativity. A conversation between a peasant, a priest and a physician may produce novel ideas that would never emerge from a conversation between three hunter-gatherers.

► **Increasing the number of connections between processors.** There is little point in increasing the mere number and variety of processors if they are poorly connected to each other. A trade network linking ten cities is likely to result in many more economic, technological and social innovations than ten isolated cities.

► **Increasing freedom of movement along existing connections.** Connecting processors is hardly useful if data cannot flow freely. Just building roads between ten cities won’t be very useful if they are plagued by robbers, or if some paranoid despot doesn’t allow merchants and travelers to move as they wish. [Unquote.]

Harari is presenting these ideas as relatively new. Little does he realize that at least in the context of naval systems, a genius named James Carruthers understood and implemented them back in the 1970s. **S**





Guest Speakers



► At the NAC-Ottawa monthly meeting of November 4th, 2019 Branch Vice-President **Tim Addison** presented Commander of the RCN VAdm **Art McDonald** with a gift of Salty Dips in appreciation for his interesting and often provocative discussion of the state of the Navy and the way ahead for personnel, operations, ship construction and public relations.



◀ Rear-Admiral **Casper Donovan**, Director General Future Ship Capabilities (DGFSC) addressed the December 2nd NAC-Ottawa monthly meeting. RAdm Donovan provided his thoughts on new capabilities, future developments and the need for innovation as the RCN prepares for transition to operations with the Arctic Offshore Patrol Ships, Joint Support Ships and the Canadian Surface Combatant. The RCN is looking to the CSC in particular to be a game-changer, in much the same way as the Canadian Patrol Frigate radically altered the way naval combat systems were integrated and employed. Now that most shipboard systems are integrated and share data and control, RAdm Donovan postulated that the next step may be to find effective ways to exploit the huge amounts of data that will become available, so as to markedly improve combat situation outcomes. Branch Vice-President **Tim Addison** presented RAdm Donovan with a copy of the latest volume of Salty Dips in appreciation for his candor and insight.



◀ On February 3rd, retired rear-admiral and current DND Associate Assistant Deputy Minister (Materiel) **Simon Page** receives a gift from NAC-Ottawa Vice-President Tim Addison. The gift was in appreciation for his interesting and informative insight into the workings of ADM(Mat), and the legal and governance environment that it must operate within. The talk provided a strong foundation for the theme of NAC-Ottawa's winter speaker program addressing the issues and way ahead for the sustainment and capability of the RCN, and it engendered much informed discussion and debate.



◀ At the branch meeting on March 2nd 2020, NAC-Ottawa Vice-President **Tim Addison** extends a gift and the appreciation of the Branch to guest speaker retired lieutenant-commander and branch member **Linas Pilypaitis** for his interesting and informative talk on maximizing one's finances in retirement, including the handling of charitable donations. **S**





Awards

► At the NAC-Ottawa monthly meeting of November 4th, 2019, on behalf of all NAC and witnessed by family members and the Commander of the RCN VAdm **Art McDonald**, Branch Vice-President **Tim Addison** presented the NAC national Gold Medallion and accompanying certificate to retired Canadian Merchant Navy Captain **Paul Bender**. Captain Bender is a Merchant Navy World War II veteran. The award is for his dedicated and highly successful campaign to have Canadian Merchant Navy and RCN wartime sunken vessels recognized by the federal government as national war graves on a par with the Commonwealth war graves. The vessels will now be under the same protection and reverence accorded all other war graves.



◀ On December 2nd, Branch President **Barry Walker** presented past Branch Vice-President **Alain Garceau** with the NAC National Silver Medallion. The award reflects Alain's dedication to NAC and its goals in support of a strong, recognized RCN that contributes to the sovereignty and security of Canada, as well as his far-reaching contributions to the Branch and its successes. **S**





In Attendance



◀ At the NAC-Ottawa meeting of February 3rd, in attendance were representatives of industry plus familiar faces. Shown from left are retired lieutenant-commander and current Assistant Vice-President Seaspan Shipyards **Stan Jacobson**; BAE Systems Country Director for Canada **Anne Healey**; and retired rear-admiral and past ADM(Materiel) (and father of Anne) **Ed Healey**. BAE Systems graciously covered the branch's costs for the evening, including refreshments. **S**

Donations to the Royal Canadian Sea Cadet Education Fund

► On February 26th, 2020, NAC-Ottawa Branch President **Barry Walker** (right) presented two cheques totalling \$6250 for the Royal Canadian Sea Cadet Education Fund. Receiving the donations on behalf of the education fund was retired Capt(N) **Harry Harsch**, who chairs the fund and also serves as Vice-President Maritime Affairs, Navy League of Canada. One cheque for \$5,000 was donated by the NAC National Endowment Fund, and the other for \$1,250 was donated by the members of NAC-Ottawa. **S**





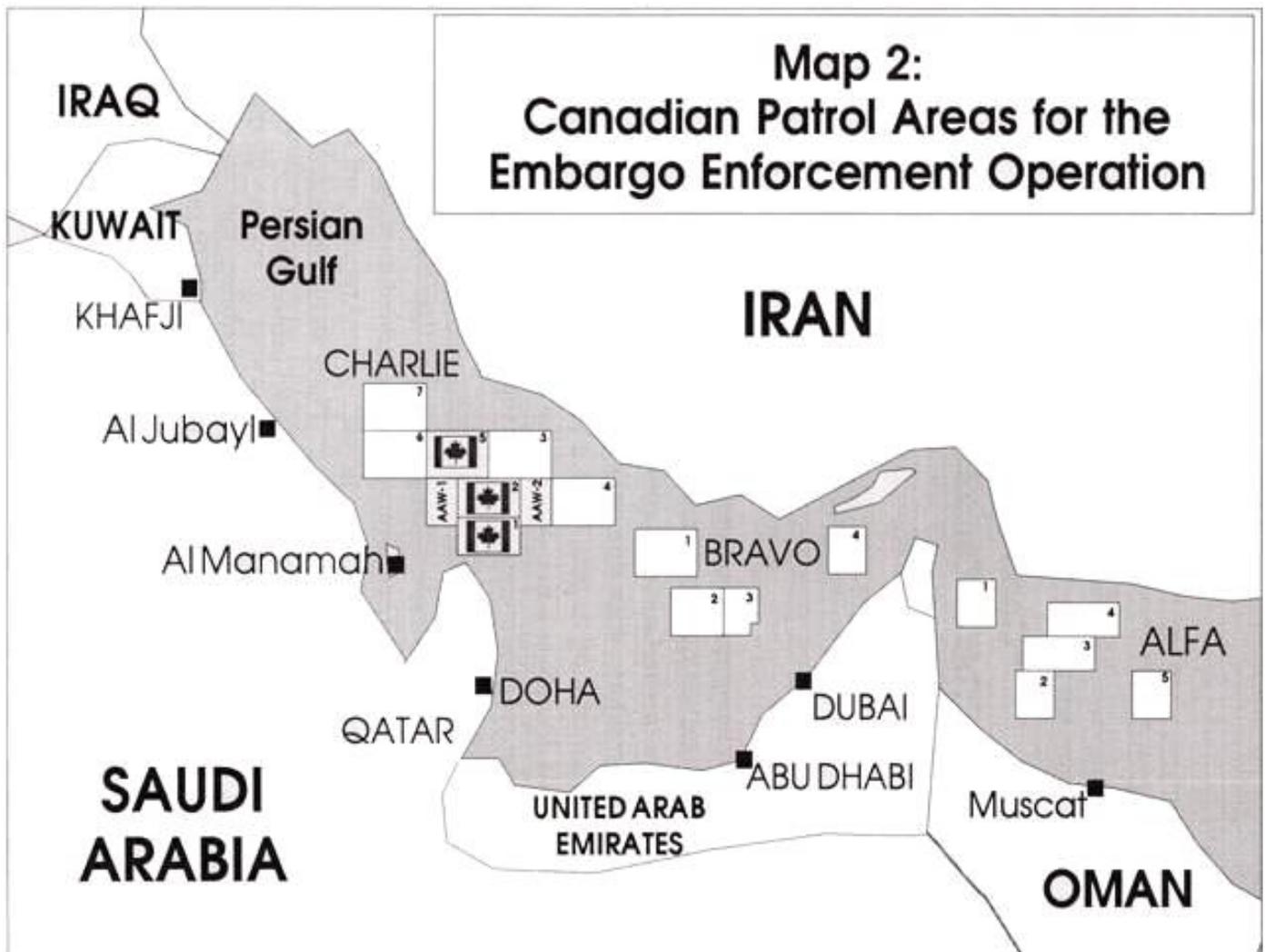
SEA KINGS IN THE PERSIAN GULF – PART 3

By Ernie Cable
Shearwater Aviation Museum Historian

Part 1 of this article can be found in the Spring 2019 edition of Soundings. It describes the heroic efforts of Maritime Air Group personnel to prepare Sea Kings for deployment to the Gulf War in 1991. Part 2 can be found in the Autumn 2019 edition. It narrates the way the ships and Sea King detachments prepared for combat while enroute across the Atlantic, through the Mediterranean Sea and Suez Canal, and into the Persian Gulf. This final Part 3 records the operational involvement of the detachments in the war. (Maps are taken from “The Persian Excursion” by Cmdre Duncan Miller and Sharon Hobson.)

Maritime Interdiction Operations

Shortly after the Canadian Task Group arrived in the Persian Gulf in late September, United States Navy Rear-Admiral Fogarty, who had been selected as the Maritime Interdiction Force Commander by the allies, called a meeting of the various navies to coordinate their efforts. At the meeting the naval representatives divided the Persian Gulf and Gulf of Oman into 16 patrol areas or “boxes” as indicated on Map 2. Coalition navies were assigned to patrol the various areas based on their capabilities and preferences. Canada with just three ships took





responsibility for two sectors, which necessitated the Task Group using the supply ship, *Protecteur*, in a destroyer's role. The sectors that Canada patrolled depended on which ships were on station. When the two destroyers, *Athabaskan* and *Terra Nova* were on station they took sectors Charlie 5 and Charlie 2. When one destroyer and *Protecteur* were on station, the destroyer would be in either Charlie 5 or 2, but the supply ship, which would be a prime target for an Iraqi air attack, was kept out of *Exocet* anti-ship missile range, in Charlie 1.

The task of the multi-national force was to enforce the embargo against Iraq. Naval ships and aircraft "hailed" each vessel in its patrol area to determine the name, registration number, cargo, point of origin, destination, date of departure and date of arrival. While these questions were being answered, the naval ship or helicopter would be checking its registry and ensuring that the information jibed with the information in its records. By using the supply ship and having five Sea King helicopters available, the Canadian Task Group out-performed all others. With only three ships in the Gulf, Canada conducted 25 percent of the total challenges to merchant shipping.

The Canadian ships were able to conduct such a high percentage of the challenges mainly because of their Sea Kings. These aircraft were the only allied helicopters in the Gulf equipped with FLIR, giving the coalition forces their only night capability. In the initial planning stages at Maritime Air Group Headquarters, FLIR was thought to be a too difficult modification for the Sea Kings, but through the determination of Major Chris Little, the FLIR became a grateful reality.

When the Sea Kings took off from their mother ships on a mission, they were supplied with a list of vessels that were not to be hailed: alliance supply ships or merchant ships, for example, that had already been cleared by allies operating in the southern Gulf or the Gulf of Oman. They also had a list of ships whose movements should be verified, but not necessarily hailed. Everything else the Sea Kings should hail.

Using radar or night vision goggles, the aircraft would detect a contact and close in on it. Depending on the haze, the Sea Kings could use their stabilized binoculars from a distance of up to 10 nautical miles (18 km) to determine the vessel's general shape and direction. By heading towards the ship's stern the helicopter could expect to close the distance undetected, using the FLIR to ensure there were no weapons or crew members with small arms. After reading the ship's name and port of registry, the Sea King could then pass the information to the nearest Canadian ship operating in the patrol area for hailing, or the Sea King could hail the ship itself.

Terra Nova did not have a helicopter on board but had the use of aircraft from other ships in the Task Group. *Terra Nova's* Captain would not accept the word of anybody in a hailed vessel over the radio. If a Sea King was not available to confirm the information, he would rush over to the contact and approach the ship from the stern at high speed, which at night made for some adrenaline surging rides.

During the interdiction period, the Sea Kings flew approximately 12 hours a day, mostly at night because their FLIR sensors could detect ships and read the names on their hulls in the darkness as well as being able to detect mines in calm seas. The cooler night air was also easier on the aircraft and their crews.

In addition to their FLIRs, Canadian Sea Kings had another advantage over other allied helicopters in the Gulf -- Canadian pilots were experienced in low level flying. Because the Sea Kings were normally used for anti-submarine warfare, the pilots were trained to operate at





altitudes between 40 and 150 feet (15 and 50 meters) in order to use the dipping sonar, which was lowered from the aircraft into the sea. LCol McWha noted that crews who don't fly that mission don't fly that low, whereas the Canadian pilots were comfortable flying just above the waves, even at night with lights out.

In addition to searching for and hailing ships, the Sea Kings stood ready to insert armed boarding parties aboard uncooperative ships. This manoeuvre was learned from the British marines aboard the Royal Navy's guided-missile destroyer, HMS *Gloucester*, while transiting in company through the Red Sea. The Canadian routine for inserting a naval boarding party, known as VISIT for Vertical Insertion Search and Inspection Team, required two Sea Kings. The first Sea King used its machine gun to cover the second helicopter while it hovered over the ship to allow the armed boarding party to rappel down the rope onto the

ship's deck. Then the Sea Kings would change roles so that the second half of the boarding party from the first aircraft could rappel down. The Canadians became extremely proficient in the VISIT manoeuvre, inserting ten men from the two helicopters in one minute 55 seconds. Regardless, VISIT was never exercised for real, as the ships were operating too close to Iraq. If the Iraqis were as well-organized as the allies thought (but weren't), the Sea Kings and the insertion team would have been very vulnerable to attack.

As part of pre-embarkation preparation, LCol McWha had organized training from the United States Marines to teach Sea King crews about air combat manoeuvring and helicopter evasion tactics to escape Iraqi fighters. During the very dangerous period before the actual fighting began, one of the Sea King pilots got an unwelcome chance to try out some of the defensive manoeuvres. One night on a training flight in the north central Gulf the radar warning receiver buzzed indicating the Sea King was targeted by a missile approaching from the north. The pilot instinctively followed a sequence of moves to save his aircraft: he fired his flares, turned 90 degrees to the right and dropped 150 feet (50 meters). The problem was that he was already flying at 150 feet. The sea came up very quickly! Luckily, LCol McWha was in the co-pilot's seat. He was momentarily distracted by the pilot's firing of the flares and when he looked back at the instruments he saw the altitude descending down through 30 feet (10 meters) at a rate of descent of 750 feet (250 meters) per minute. He instantly grabbed the controls, levelled the aircraft and after touching the tail wheel in the water, climbed back to altitude. The lesson for the pilot was, "Think first, act second; emergency reactions should lead to survival not disaster."

Combat Logistics Force

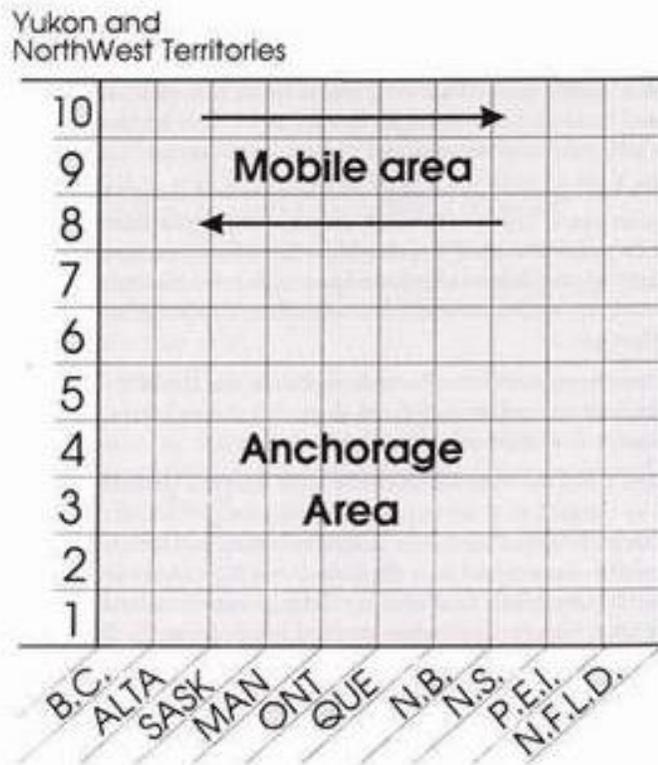
In January 1991 the Canadian Task Group was tasked to organize the Combat Logistics Force (CLF). The role of the CLF was to keep the front line naval combatants supplied with fuel (oil, jet fuel, hydraulic fluid, lubricants), ammunition (bullets, cannon shells, missiles, rockets and bombs) and spare parts (tires, clamps, nuts and bolts, circuits and wiring, tubes and computer chips). The requirement was huge. Every 48 hours each of the four aircraft carriers required 1.5 million gallons of JP5 aviation fuel and 200-300 lifts of ammunition. In addition, there were 100 other ships of varying sizes that had to be supplied.



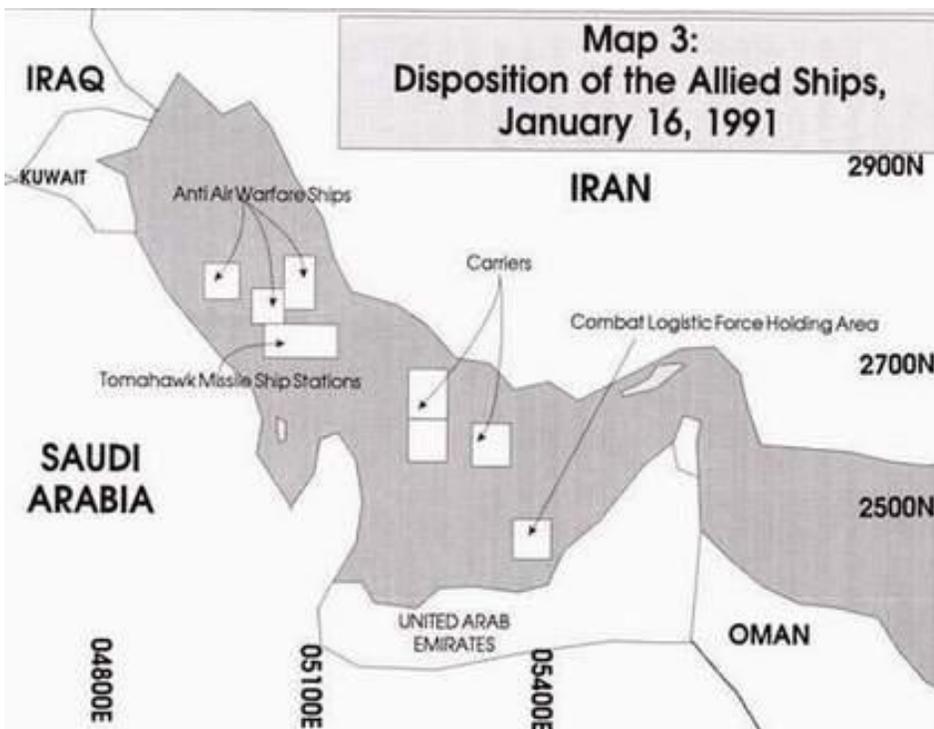


The Canadian Task Group began the operation by selecting a 20 by 20 nautical mile area in the southern Persian Gulf, nicknamed “Pachyderm Palace”, in which allied combat support ships, ammunition ships, general cargo ships, destroyer tenders and tankers could anchor after entering the Gulf or returning from taking on cargo at a supply port. The area was divided into two nautical mile squares numbered 1 to 10 from north to south, and by the names of Canada’s ten provinces running east to west. Naval destroyers from the 12 countries that had ships in the CLF escorted the supply ships north from Pachyderm Palace to the carrier battle group.

As a result of the changing tactical situation, three distinct phases were applied to the coordination of the logistics effort. In the first phase the CLF operated in the southern Gulf while the carrier battle groups operated in the south central Gulf (Map 3). In the second phase, the CLF was still coordinated out of the southern Gulf, but the carriers moved north (Map 4). In the third phase, with the almost complete elimination of the air and surface threats, the CLF moved north as well (Map 5).



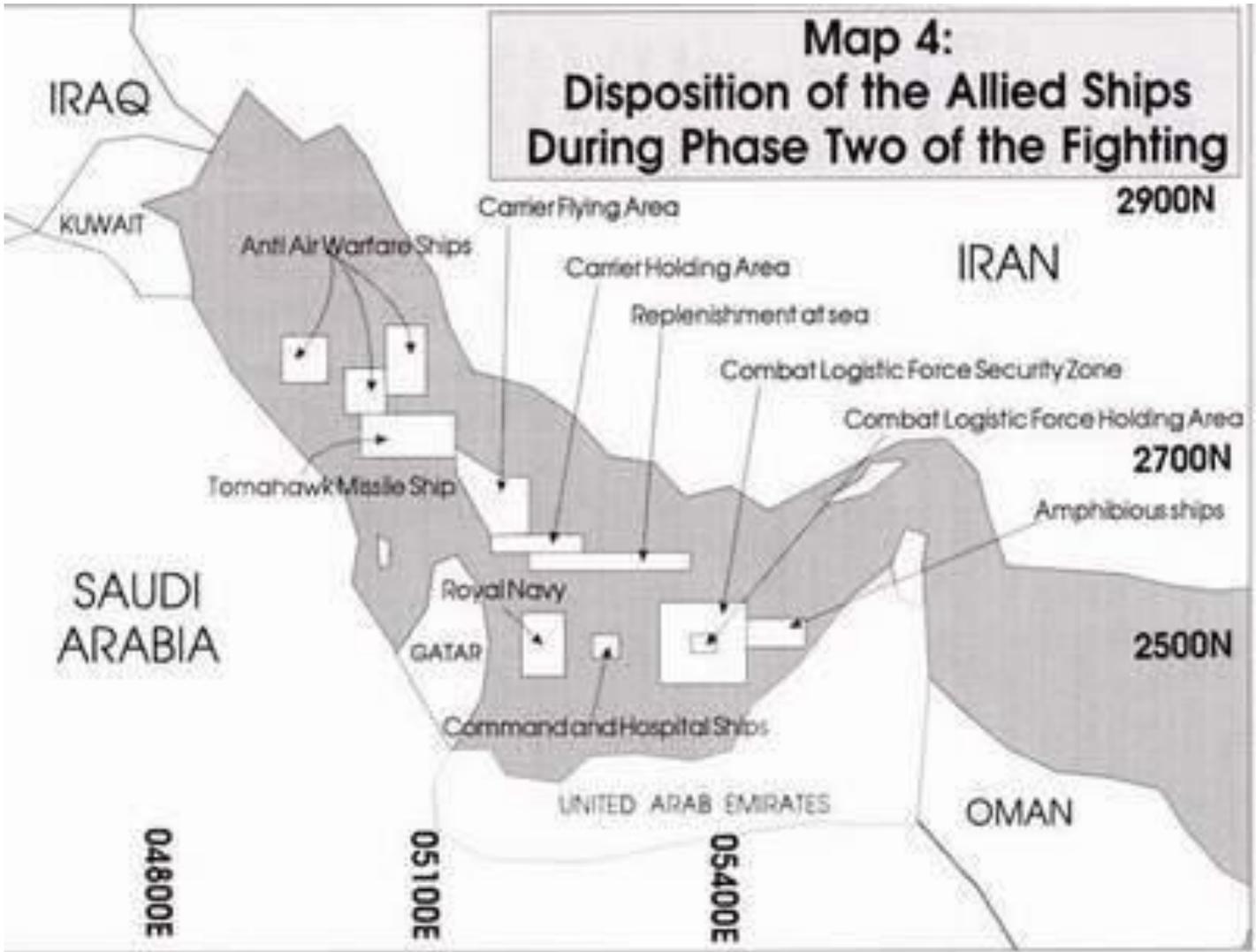
*Combat Logistic Force Holding Area
“The Pachyderm Palace” (Can)
“The Ponderosa” (US)*



The CLF Air Plan

In addition to coordinating the activities of all of the supply ships and their escorts, the Canadian Task Group also assumed responsibility for the flying program of the 45 helicopters of eight different types operated by the navies in the CLF. This responsibility fell squarely on the shoulders of Major Pete Nordland, who up till then had been drawing up the flying program for just Canada’s five Sea Kings. Major Nordland contacted each of the navies operating helicopters to determine when they could make their helicopters





available, the normal sortie duration, their capabilities and each navy's air requirements and restrictions. By From this information he prepared a large state board on which he recorded each of the types of helicopters, their weapon loads, tasking capabilities, take off time, land time, their parent ship and the sector to which it was assigned. From the state board Major Nordland prepared the daily flying program that was finalized at the briefings each evening. On an average day, he juggled the activities of 12 – 20 aircraft; but at times there were as many as 45 and as few as two.

Like the ships they flew from, the allied helicopters had varying capabilities. Some had aircraft equipment that was especially suited to mine surveillance, others better equipped for over-the-horizon ship surveillance. In addition to the different capabilities, all of the navies had their national regulations governing the use of their helicopters. The Argentines, for example, were not authorized to fly beyond visual sight of their destroyer. For that reason, Major Nordland assigned them a patrol area of about five miles around their own ship. Each aircraft had its own cycle of how many hours it could fly before it required maintenance. The Canadian Sea Kings, for example, could fly 12 hours straight with only stops for fuel and crew changes. Another type of helicopter could fly for six hours, require two hours maintenance, and then fly for another four hours. Major Nordland had to identify those cycles in his planning. As ships came in, and a day or two later left the logistics force area, Major Nordland had to adjust his scheduling to accommodate the newly available and departing assets. Usually the replacement helicopter did



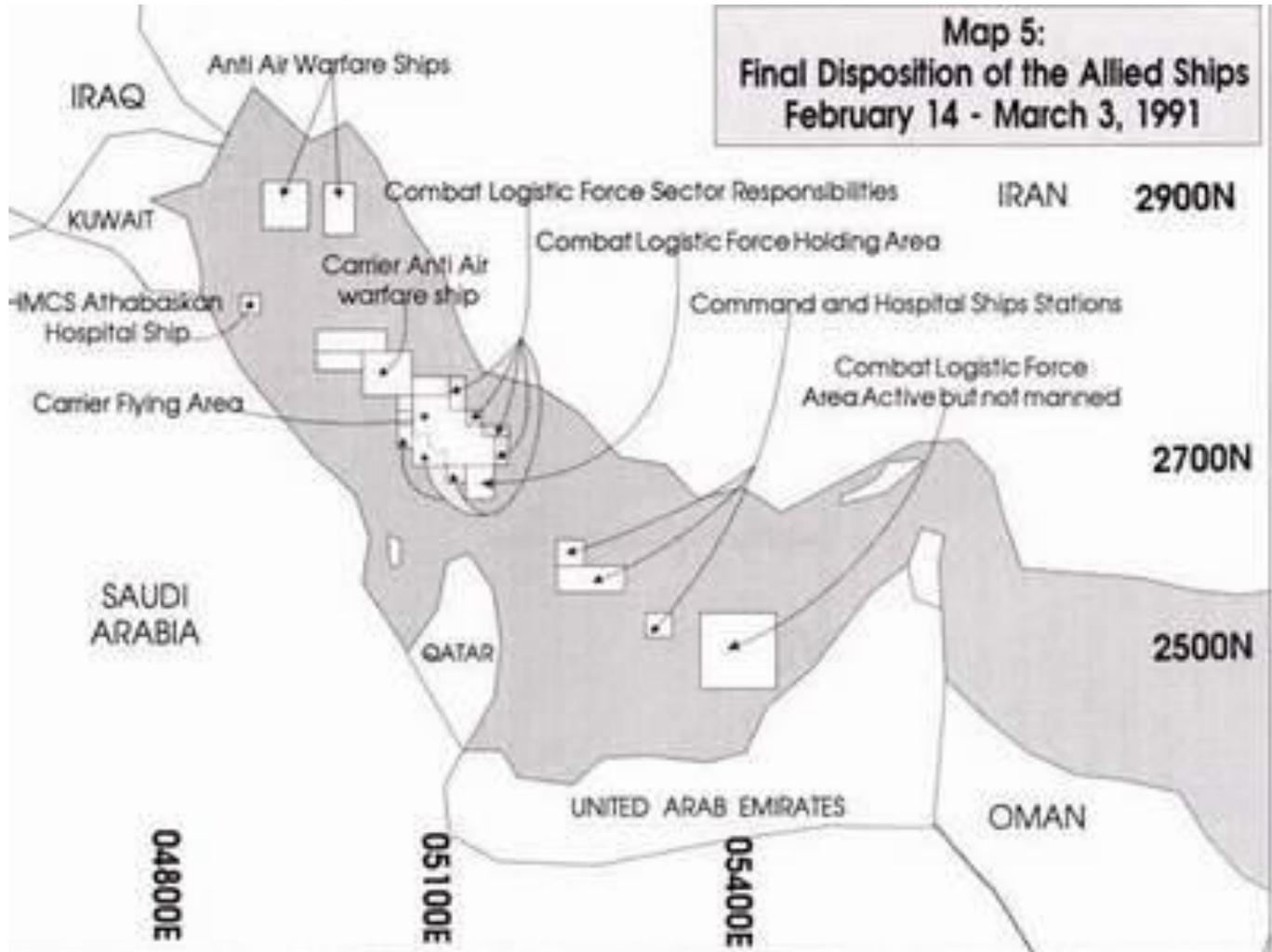


not have the same capabilities or operating criteria as the one that had just departed. So the juggling continued around the clock.

In addition to hailing ships, the helicopters were needed for surface surveillance to protect the CLF against small terrorist craft. When the CLF was in the southern Gulf, on the edge of traditional fishing grounds, numerous dhows (fishing boats) were in the vicinity. The allies never knew if the dhows were just going about their daily business or if they were about to launch an attack. During the Iran-Iraq war in the 1980s, the dhows were known to have launched shoulder-mounted missiles. Being prudent, the helicopters protecting the logistics force devised a means to ward off the dhows. One of the crew members would don a gas mask and hold up a drawing of an international stop sign and a skull and cross bones in the open doorway to warn the dhow it was entering a dangerous area.

Only occasionally did the helicopters have to use a more direct method. On 1 February 1991, a Canadian Sea King spotted a dhow whose captain refused to turn his boat around despite warning signals from the helicopter. Finally, Master Corporal Karin Lehmann, the gunner, fired several bursts of tracer over the dhow's bow and it beat a hasty retreat. This marked two Air Force firsts; a Sea King had fired the first Air Force rounds in the Gulf war and Master Corporal Lehmann was the first female Air Force member to fire at the enemy.

Similar to the earlier phases of the war, the helicopters continued to be tasked to look for floating mines. Although the CLF was kept far away from the mined areas, there was concern that some of the 1200 mines left over from the Iran-Iraq war may have come loose from their tethers and drifted into the southern Gulf. Additionally, the task of oil slick surveillance was added to the Sea Kings' repertoire later in the war. The helicopters scouted a route clear of the



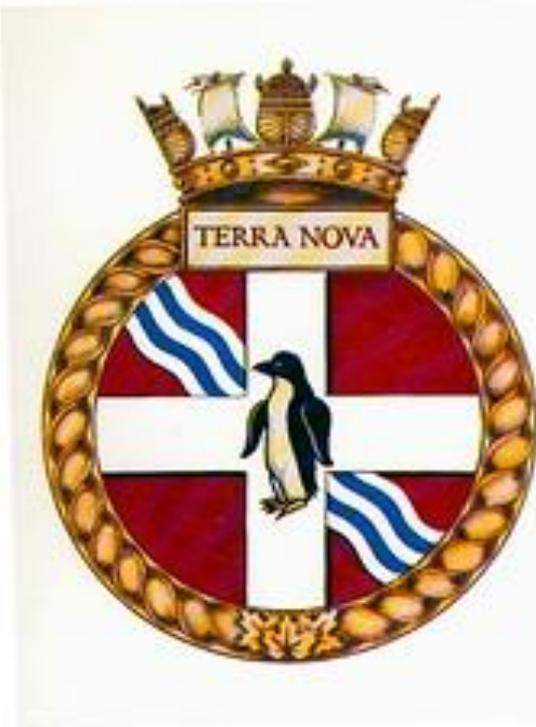


crude oil that flooded into the Gulf from sabotaged oil wells so that the ships could avoid having the water intakes suck up the oil into their machinery.

When the logistics force moved to the north closer to the carriers in the third phase of the war, the Canadian Task Group also assumed responsibility for patrolling the eight sectors around the carriers' southern deployment area. With the naval escorts for both the CLF and carriers now under his control, Capt(N) Miller became responsible for approximately 60 ships. Ironically, as the Canadians took on the responsibility for a larger number of ships, Major Nordland found that the number of helicopters available to him drastically reduced. Since the CLF box was now much closer to the carriers in the northern part of the Gulf, there was not as great a requirement to escort the tankers back and forth. Therefore, many escort ships, with their helicopters, were sent up north to augment the attacking surface forces.

Because the CLF was operating closer to Iraq and Kuwait during phase three, the mine threat increased substantially. So Major Nordland tasked the available helicopters, which for the most part were the five Canadian Sea Kings, almost solely for mine surveillance. Despite the capabilities of the FLIR sensor, the "mark one eyeball" remained the best sensor to detect mines. Consequently, the aircraft were scheduled to fly during daylight hours. The high regard in which the allies held the Canadian Sea Kings was clearly demonstrated on 18 February when the American Aegis guided missile cruiser, USS *Princeton*, struck a mine off the coast of Kuwait. RAdm March, the American naval commander in the Gulf, called Capt(N) Miller and said, "I need a ship to escort a tug up to extract USS *Princeton* out of a minefield." He specified that he wanted it to have a helicopter and a good anti-mine capability, and then added, "I prefer it to have a Canadian flag flying from the stern." The Sea Kings provided the surveillance capability for *Athabaskan* to lead the tug around the oil slicks and through the Iraqi minefields to the *Princeton*. With *Princeton* under tow, the Sea Kings proved invaluable in spotting mines and picking a clear path down the Gulf to Bahrain.

The aircrew and technicians, who worked extremely long hours keeping the Sea Kings flying, became quite attached to their aircraft. At LCol McWha's suggestion the ground crew gave each of the five aircraft a nickname reflecting its personality. Sea King number 417, because of its reliability and omnipresence in all of the major operations was called "Big Bird" after the famous Sesame Street character. Master Corporal "Rat" McCafferty, the resident artist, painted a picture of the character on the side of the Sea King. He designed appropriate characters on the other Sea Kings as they were named. "Hormuz Harry" had a goofy looking camel,





“Chicken Hawk” had an ugly, mean-looking little bird, “Lucky Louie” had big, grinning, sharp-clawed, well-fanged, fat cat, and the “The Persian Pig” was adorned with a silly, clumsy-looking hog.

When the ceasefire was announced on 28 February, *Athabaskan* and her air detachment had been at sea for 45 days without a break. The war’s end brought no immediate relief. The ship was in a minefield off the coast of Kuwait escorting the hospital ship USS *Comfort* to an anchorage near Raz Al Khafji. With the smoke from the burning oil wells engulfing the ship, a lightning storm raging, black rain pouring down, and the immediate danger of being blasted by a mine, the crew felt sure they were in hell. It took 18 hours to get out of the treacherous minefield to an area where the crew could relax. The ship remained in some danger until it could get south of Qatar because of the large number of floating mines, so for the *Athabaskan’s* Sea Kings, there was no let up in the operations until the ship sailed into Dubai on 3 March.

Approximately 30 Chief of Defence Staff Commendations were awarded to individuals for their outstanding performance in the Gulf war. About half of these went to members of the Canadian Task Group, including Lieutenant-Colonel Larry McWha. The Commander of Maritime Command, Vice-Admiral Robert George, presented a number Maritime Commander’s Commendations to approximately 35 officers and Non-Commissioned Officers, including Major Pete Nordland. Similarly, units were singled out with 423 Anti-Submarine Squadron being awarded the Canadian Forces Commendation for their work in preparing and maintaining the five Sea Kings which sailed with the Task Group. The Sea Kings accumulated over 2,500 flying hours during the eight-month deployment. The air detachments achieved a mission availability and completion rate of over 97 percent, possibly the highest achieved by any of the allied units in the Gulf.

On 11 November 1993, the Governor-General announced that HMC Ships *Athabaskan*, *Protecteur* and *Terra Nova* and 423 Anti-Submarine Squadron had all been awarded battle honours. For 423 Squadron the battle honour “Gulf and Kuwait” joined the previously earned battle honours of Atlantic 1942 – 1945, English Channel and North Sea 1944 –1945, Normandy 1944 and Biscay 1944, embroidered on the Squadron’s Standard.

Nonetheless, the most significant change from the Air Force’s perspective was the Sea King had proved to be more than a specialized anti-submarine helicopter. It had demonstrated, under combat conditions, an ability to provide integral maritime air support in a wide range of roles that previously had not been envisioned. In recognition of their new multi-purpose maritime support capabilities, 423 and 443 Helicopter Anti-Submarine Squadrons (HS 423 and HS 443) were re-named 423 and 443 Maritime Helicopter Squadrons (MH 423 and MH 443) in 1994. Since their involvement in the Persian Gulf in 1990-91, the Sea Kings have been the lead combat aircraft in all of Canada’s United Nations operations. These have included post-Gulf war interdiction operations in the Red Sea, relief and policing operations in Somalia, blockade operations in the Adriatic Sea in support of United Nations forces in the Bosnia-Croatia and Kosovo-Serbia conflicts, peacekeeping in East Timor and most recently a return to the Persian Gulf in support of anti-terrorist operations in Afghanistan.

Sources

- *The Persian Excursion*, Commodore Duncan (Dusty) Miller and Sharon Hobson.
- *Certified Serviceable*, Peter Charlton, Michael Whitby and Leo Pettipas.
- The Author’s *Op Friction* experience as Deputy Commander Maritime Air Group.
- Notes from Colonel Larry McWha, CO 423 Squadron during *Op Friction*. **S**





REMEMBER

By Pat Barnhouse

Active Members

LCdr Bruce Edwin HAYES, CD, RCN(Ret'd). In Ottawa 10/12/19 at 88.

Others Known to Members

Cdr(Ret'd) Douglas Kenneth BROUGHTON, CD*. Former member, in Ottawa 29/02/20 at 72.

LCdr William Ross COPPING, CD, RCN(Ret'd). Former member, in Ottawa 01/03/20 at 95.

Cdr Terence Edward CROSS, CD*, RCN. In Colorado Springs, CO 24/10/19 at 54

LCdr Angus Campbell FRASER, CD, RCN(R)(Ret'd). Former member, in Ottawa 22/03/20 at 81.

Lt(L) Rodney Frederic Brandon HARRIS-LOWE, RCN. In Peterborough 10/02/20 at 84

Lt Francis Theodore DOWDALL, CD*, RCN(Ret'd). In Perth, ON 18/12/19 at 89.

El S/Lt William Hunter HENRY, RCNVR(Ret'd). In Ottawa 12/01/20 at 96.

CPO2 Neil HESKETH, CD, RCN.** In Val des Monts, QC 18/10/19 at 57

Capt Michael John HUBBARD, Master Mariner. In Ottawa 04/10/19.

Lt Isabel Margeurite PORTER (nee DAVIS) WRCNS. In Ottawa 28/09/19 at 96.

S/Lt William Gillies ROSS, RCN(R)(Ret'd). In Sherbrooke, QC 07/10/19 at 88.

LCdr Thomas August SIGURDSON, CD, RCN(Ret'd). In Ottawa 08/11/19 at 92.

Lt Wayne Leonard Laird SIMMONS, RCNVR(Ret'd) In Trenton, ON 07/11/19 at 99.

LCdr Howard Carew WALLACE, CD*, RCN(Ret'd). In Ottawa 11/19 at 90.





GASP 1

By Richard Archer

Stop me if you've heard this yarn before.... It concerns the time I was posted as a lieutenant-commander on exchange with the British Royal Navy in the late 1970s.

In September of '76 I had been posted out of my command of HMCS *Fundy* on the west coast. My next substantive posting was scheduled to be exchange duty with the RN at its School of Maritime Operations (SMOPS), located at the establishment HMS *Dryad*, in the South Downs just north of Portsmouth. But the posting start date wasn't until the summer of 1977. That was okay, as I was to take the RN's six-month staff college at the old Trafalgar-era naval hospital site on the Thames in Greenwich, London, with a view to becoming familiar with RN administration and practices. Still okay, but the staff college didn't itself start until January. So what to do with me until then? It turned out that the Second Canadian Destroyer Squadron had an opening – the Squadron Weapons Officer had departed without relief. Now, I was a trained and experienced Operations Officer...but weapons? My only recent exposure to the subject occurred at sea looking over the shoulders of the two weapons officers I served with in HMCS *Saskatchewan*, Gord Forbes and Phil Young. I knew how to engage the enemy using the ship's two gunnery systems and the antisubmarine mortar, and I had been one of the first OpsOs to have participated in gunnery training (with Phil) at the Navy's gunnery range on that headland just past Eastern Passage outside Dartmouth NS. But the Second Squadron comprised four Improved *Restigouche* class, complete with new digital systems like the 505 Sonar, including a VDS, and ASROC. I took the job thinking, "Where's there's a will, there's a way...." But I survived, and my career remained intact. One of the ships in the squadron lost its 505 VDS off San Diego when the body collided with a USN submarine that had come up too shallow...but that's another story.

I had a chance to speak with my mentor, then-Capt(N) Dick Okros, who at the time was the commander of the Fourth Squadron, and thus my boss when I was in minesweepers. He had been the XO in HMCS *Mackenzie*, my first ship when I was a brand-new sub-lieutenant. I mentioned what my career manager had in store for me – RN Staff College and then exchange at *Dryad*. He wasn't categorical about it, but he did try to dissuade me from taking the position. He said that overseas postings are almost always bad news for careers, basically because foreign navies don't know how to write Canadian PERs and they are dismissed by promotion boards. I discussed this with Marilyn, and we concluded that we only live once, and that the adventure of an overseas posting would be worth whatever risk to my career. In later years we followed up with this idea more often than not – eventually we took up postings in Hawaii and at NATO HQ in Brussels.

Come January 1977, Marilyn and I along with our two daughters, one in elementary school and the other a pre-schooler, left the comforts of Victoria, BC and travelled by service air, first to minus-20 Ottawa to stay with Marilyn's brother and his family. At NDHQ I had the standard briefing from naval staff on what to expect and do on exchange. Then we flew again on service air to wet and chilly London to check in with Canadian Defence Liaison Staff at the Canadian embassy on Grosvenor Square.

The six month stint at RN Staff College at Greenwich is another interesting and eye-opening yarn in itself. A big lesson, for example, concerned the way that the RN was still very class-conscious – in those days they tended to treat the hands as they would the servants back in the ancestral home, rather than as pro-active members of the team. While I stayed true to my Canadian roots, this perception was something I took with me to *Dryad*, and being aware of it helped me with navigating *Dryad's* internal politics and practices.

One thing I did have trouble with right away was the upper class, almost effeminate accent that most RN officers deployed. Since I didn't have it, I sometimes didn't get the right reaction from, say, a telephone call. My RN deputy in the office in my second year had an upper crust





name, Villiers, which stood him in good stead, but on the telephone at least he still had to overcome his lower middle-class accent with fake Oxbridge or BBC “received pronunciation”. But don’t get me wrong; I had tons of respect for the RN officer corps and their professional, innovative approach to maritime warfare.

But I’m here to tell you about the two years in *Dryad*. My Canadian predecessor there was Steen Jessen, who had been a member of the honour guard at my and Marilyn’s wedding in Victoria, and so we knew each other. On his posting he lived in Alverstoke, which was incorporated within the city of Gosport, across the harbour from Portsmouth. He arranged for us to view a house for rent coming available from one of his neighbours who was just retiring from the RN as a captain and taking up an unaccompanied position advising the Dubai government. Because of schooling, the captain’s wife and kids were to stay at another residence closer to London. We liked the house, located on a leafy street in what turned out to be the arch-typical English village of Alverstoke, complete with an old church, a baker for the daily bread and some half-timbered and thatched houses. It had a lawn tennis club that we later joined, one that still had only grass courts. And the nearby Church of England grade school for our older daughter.





In due course we also found a pre-school for our younger daughter – I still remember seeing her arriving back from school on the child rear seat of Marilyn’s bicycle, dressed in the school uniform of a pinafore and straw boater. The house was also within easy walking distance of salt water on the Solent.

HMS *Dryad* was actually a very interesting place. It was originally the mansion and extensive lands of an aristocrat. The mansion was called Southwick House, and the adjacent village of Southwick was entirely on the grounds of the estate. The gentleman of the house had passed away well before I arrived, but his widow (who, I heard, was once his housekeeper) lived nearby. As the story goes, she had stipulated which of the two pubs in the village was to be for the gentry and which one for the workers.



But Southwick House’s claim to fame was that in 1944 it had been requisitioned temporarily by the British Government to act as Eisenhower’s headquarters for D-Day. But true to any governmental bureaucracy, the “temporary” nature of the requisition had carried over well into the 70s. When I was there the mansion itself was the wardroom, and extensive separate construction had occurred to house

all ranks and the resident facilities such as SMOPS. Given the extensive grounds, *Dryad* had also been designated as the RN’s official recreation centre, with an 18-hole golf course, all sorts of indoor and outdoor courts, different pitches, a complete horse stables (exploited by our daughters) and even a stocked trout pond.

The mansion’s history as D-Day HQ was maintained. D-Day’s huge actual map of the English Channel and all the operations areas, routes and beaches was hung on one wall. And in the wardroom main bar was a discreet brass plaque that said, “In this room on 5 June 1944, General Dwight D. Eisenhower made the decision to proceed with Operation Overlord....”

Of course naval thinking changes, and so today SMOPS no longer exists. As with most navies, the RN eventually concluded that maintaining the silos between operations, communications, electronic warfare, weapons and combat system engineering (all of which had their own separate establishments scattered around the Portsmouth area) was increasingly counter-productive. Sometime after I was there, training for shipboard teams was eventually consolidated at HMS *Collingwood*, located in the suburbs of Portsmouth. *Dryad* itself no longer exists. I hear that at least some of the ex-*Dryad* facilities, including the mansion, are now the location of Britain’s D-Day Museum.

The job I was to take up was as a training officer in the *Redpole* analogue trainer, similar in scope to the operations trainer at that time at the Fleetschool in Halifax. The incumbent Brit





Our home in Alverstoke in a water colour we commissioned from a local artist.

senior Training Officer in *Redpole*, and soon to be a good friend, was the refined and dignified LCdr John Hastilow. He departed on schedule after my first year in *Dryad*, but our paths did cross again some years later. As a captain, he was CO of a Type 42 air defence destroyer that passed through Pearl Harbor, part of a British task force enroute around the world. He had apparently asked about me when his ship had been in Esquimalt and had heard that Marilyn and I were at that time on Commander Third Fleet staff in Hawaii. He sent a message and in due course Marilyn and I were invited onto his ship in Pearl Harbor and we showed him some of the sights of Oahu.

But I digress.... Back to *Redpole*. It was designed to train the combat teams of the aging analogue ships like the *Leander* frigates. An entirely new digital trainer for the Type 42s and their ilk was in development, named after the explorer-extraordinaire Captain James Cook, but when I joined *Dryad* it wouldn't be ready for at least another year. So in addition to the analogue ships we also had to accommodate those sporting new digital systems. The trainer had its coterie of maritime warfare experts, mostly officers including a Canadian officer, Doug Drysdale, borrowed on game day from the school's academic section, plus we had some RN sailors to do the grunt work like signals, but a significant number of positions actually running the mechanics of the game were Wrens of varied ranks.

Of course I was fully aware of modern maritime warfare, and found that the training syllabi for everyone from radar plotters, through Principal Warfare Officer courses to ships' combat teams, spared no opportunity to face the unbridled might of the Soviet armed forces.





A typical game scenario, for example, would have the British task force out in the Norwegian Sea in distant support to USN carrier groups. The Brits would have to cope with *Bear* reconnaissance aircraft followed by *Badger* bomber regimental attacks with both subsonic and supersonic anti-ship missiles, backed up by *Kinda* and other anti-ship missile-firing surface ships, and of course SSNs and SSKs. The game controllers would try to spread this threat out so it all didn't always happen at once.... At this stage of its history, the RN didn't have any aircraft carriers, and so for longer-range air defence and anti-ship attacks it was reliant on shore-based RAF aircraft (such as F4s and Buccaneers that once belonged to the Navy), under the air direction of officers on board the ships. I had to learn about this latter capability very quickly. We even practised the RN's protocols and procedures for dropping its nuclear depth charge.

Something else I had to learn was how to operate the rather antiquated trainer debriefing system, which used an 8mm film of the controller's screen to play back what happened. One could vary the speed of the unfolding events as required, but it was tricky. I settled in quickly. I enjoyed the drive to *Dryad* through the narrow country roads north of Gosport and Portsmouth. The perceived threat from the Provisional IRA was reduced, although *Dryad* did regularly practise its countermeasures against armed intrusion. I was honoured to be asked by the Leading Seamen and Below mess to be a judge at one of their gong shows. (I was the only officer in attendance.) There were a number of other Canadian Forces families in the area, and on a monthly basis I coordinated the adults taking turns to find the oldest, most remote and most quaint pub for a Canadian get together. I believe the record for the oldest pub was 12th century. Perhaps the quaintest, however, was the pub in the tiny village of World's End, just north of Southwick.

I was divisional officer for the male sailors in the trainer, but they weren't any trouble. As for the Wrens, they were a "separate but integral" part of the RN, and their divisional officer was a Wren four-stripe navy captain-equivalent officer, called a "superintendent", who worked in *Dryad's* administration. Over her shoulder she also wore the aiguillette which indicated that she was the Aide to HM the Queen. I spoke with the superintendent regularly concerning issues, mostly minor, to do with my Wrens.

As a division we did well in the intramural sports leading to the cock of the walk trophy. I led the deck hockey, while the Wrens led the way in field hockey, for example. I also played scrum half for *Dryad's* rugby team in games against the Portsmouth area establishments and others.

I'm pleased to report that between us, Richard Hastilow and I handled the year's-worth of training without any major glitches. But come the following summer, I was presented with a surprise.

One day I was asked to drop in to see the captain in charge of the school, and he made me a proposal. Instead of a second year in *Redpole*, how would I like to become the inaugural senior training officer of the digital Cook Trainer? I heard later that *Dryad* had balked at the RN candidate that the career managers had slotted in to the position – apparently he had the hard-won reputation of having an abrasive personality.... I leapt at the opportunity, knowing that the Cook wouldn't be up and running for a number of months, giving me time to get acquainted.

The Cook Trainer was in a separate building, to which I moved my office as soon as practicable. In the basement the trainer had 17 Ferranti main frame computers, and on the ground floor it had models of the operations rooms and control systems of the recent digital ships. The shipboard command and control system was called Action Data Automation Weapons System (ADAWS), which I set about learning. The "Automation" was the system's impressive capability for automatic track detection and tracking, new to me. In general though, ADAWS turned out to be a rather awkward first-generation arrangement that used four-letter codes and then numerics to enter data and to control things. To enter an X-band EW bearing at 262 degrees, say, one might have to type in something like EWXB262. I did my best to memorize a whole raft of such four letter codes.





The other thing to learn was the RN's equivalent of the RCN's "Systematic Threat Assessment and Weapons Assignment" (STARR), a mechanism to rapidly identify detected threats using what were called Zippo codes, with subsequent automatic deployment of countermeasures. If a ship radioed "Zippo 3" along with a bearing for a detected missile attack, for example, the other ships in the task immediately knew what this meant and what to do about it. This knowledge of course came in handy for the occasional times I acted inside one of the ops rooms as anything from a radar plotter to commanding officer.

Shortly after I arrived at Cook, the RN made the momentous decision to integrate the Wrens into the Navy proper, with the inevitable change of ranks and uniforms. I thus became the divisional officer for all the enlisted ranks, both male and female, in the trainer. When I gathered the Wrens, not to introduce myself (they knew me well) but to talk about how my role as their new divisional officer would work, I made the mistake of saying, "As of Monday, all Wrens in the trainer will come under me." This of course was met with good-natured cheers and hoots of laughter. I laughed along, feeling that things were off to a good start.

I also contributed in some small ways to the trainer development. A meeting identified a problem with communications by directing staff. The practice, as with Redpole, was for a directing staffer to associate himself with one of the units in the battle and use its communications channels to speak when necessary to the players. The problem was that Cook applied all the limitations such as line of sight on the channels, so if another unit was over the horizon, the staffer couldn't communicate with it. I suggested that there be stationed an aircraft given the right comm circuits in a small racetrack pattern high as possible over the central battle area, and the staffers be associated with that unit. Problem solved. I worked with the trainer's senior Weapons Electrical Officer (roughly equivalent to the RCN's CSE), to help sort out other teething issues.

But the big workload was to develop the game scenarios. For hours I sat at a display and crafted games for everything from radar plotter training through to World War III. A complete range of military and civilian vessels and aircraft had already been programmed into the system. What was needed was to create the actual game scenarios. Every track had to have a controller, usually one of the Wrens, who would act as the aviation pilot or merchant captain, controlling in real time the unit's movement, profile, emissions, comms and so on.

To start, basic radar plotter training entailed bringing in tracks representing the Hawker Hunter aircraft then operated by a civilian contractor in the Fleet Requirements and Air Direction Unit (FRADU) for air defence training. I programmed the two or three aircraft to approach the target ship wherever it was and then once overhead to loop back towards land to do it again. Easy enough, but I also had to programme things like IFF and beacon codes, airborne radars and comm frequencies. Even more difficult was the regional traffic environment. For that I invented air traffic lanes, and after I found out international separation rules I populated those lanes with every available type of civilian aircraft and their codes... and then made available the air traffic data that would normally be accessible in the ops room. Fortunately, a property of the trainer was the ability to keep all such programmed tracks in reserve on the far edge of the game area to be animated when needed. The middle- and upper-level games that I created grew in steadily increasing missile-rich complexity up to and including World War III, and they of course took me a lot longer to develop. But once I was happy, we held some trial runs and they all seemed to work reasonably well. And I was pleased with the state-of-the-art digital projection and debriefing system in the trainer's theatre.

I took the opportunity to help decorate a bare hallway in the trainer. I found a print of Captain Cook in HMS *Resolution* being greeted on future-Canada's west coast, almost exactly 200 years before, by Haida natives in their big canoes. I had it framed and annotated with a suitable brass plaque, and it hung on the wall for at least as long as I was there. I wonder what happened to it....

Finally the big day arrived – our first real game. I think it was a Principal Warfare Officer course. As with Redpole, my job as senior training officer was basically to be the Soviet





commander controlling each threat, first to use my resources to detect the Brits, and then to let them have it...tempered by the need to gain maximum training value out of the scenario in the two or three hours of game time.

I stood in my usual position towards the rear of the control room, flanked by my CPO Wren. I surveyed the banks of displays and all the officer experts and Wrens sitting at them, and all seemed to be in order. In particular, the senior controller, a Wren PO, was sitting at her display directly in front of me. The system used ADAWS-like four-letter codes and associated numerics. So the most basic of controls, game speed, used GASP. "GASP 0" entered on the keyboard was used to stop the game, while "GASP 1" was for the game to run in real time. Other numbers could be used to run the game faster than real time, useful in some training situations.

The PO Wren was looking expectantly over her shoulder at me, with her right index finger hovering over the enter button, so I knew she had already typed in the GASP 1. I surveyed again the Star Trek-like quality and ambiance of the extensive control room, and noted the palpable tension that was evident. I regret to report that my puckish nature came to fore, and I declared loudly, "Warp Factor One, Engage!"

The PO Wren did a double-take but soon enough got the message, and the game was underway. It all went reasonably well, thankfully, and it was a good beginning for a hectic training schedule stretching into the summer.

In due course my tenure as Senior Cook Training Officer came to an end, and my relief was identified: Ron Buck. He arrived a couple of weeks before I departed so I was able to give him a reasonable turnover. He seemed happy with the state of play. One of his parting comments to me when I was discussing things with him and the trainer's senior RN weapons electrical officer was that the game scenarios that I had developed needed more work. I welcomed this true observation, and felt comfortable that the trainer was going to be in good hands.

A principal legacy of mine was to be the permanent conversion of the Canadian exchange officer position from being the junior training officer of the *Redpole* era to the senior training officer in Cook. But unsurprisingly, Dick Okros was right about the RN being unable to write a Canadian PER....

Nevertheless, after *Dryad* Marilyn and I and the kids were posted back to Halifax, where I took up the two-year job of XO of HMCS *Ottawa*. Next, in the early 80s we were posted to NDHQ in Ottawa, with me in the Operational Requirements section of the Canadian Patrol Frigate project. With the departure of my boss Cdr Bob Rutherford to the NATO Frigate Replacement 90 project in Hamburg, Germany, I was made Operational Requirements Manager, though still only a lieutenant commander, and I saw the project through to contract award. Truth be told, it was this posting, along with, somewhat ironically, the PERs the USN gave me at Third Fleet in Pearl Harbor, rather than the *Dryad* sojourn that helped get me promoted to commander later in the decade.

Poatscript

Something interesting occurred in my early days in the CPF project. A British shipbuilder came to Ottawa to promote the idea of Canada joining with Britain in the development and acquisition of the RN's Type 23 ASW frigate, as an alternative to the Canadian development of the CPF. I attended the company presentation and then chatted with the principals. As it turned out, the company had brought along a few RN officers, including the ex-CO of a Type 42, some of whom had been in the recent Falklands war. They described how the Type 23 design had taken in the war's lessons learned. They themselves had been under Argentinian attack and so spoke from a position of authority. I recognized a couple of them as one-time students of mine at *Dryad*. **S**





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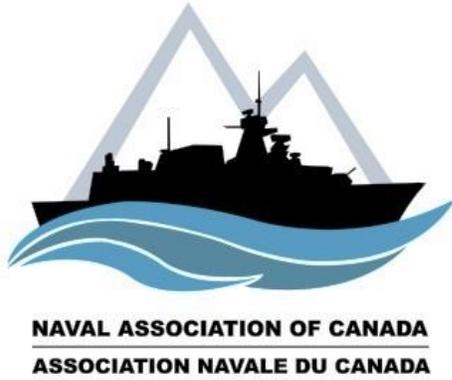
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