



News

CANADIAN NAVAL TECHNICAL HISTORY ASSOCIATION

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Greetings to Readers of the *Maritime Engineering Journal*

A few years ago a handful of enthusiasts gathered to discuss how they might pull together the information required to tell the story of the technical developments of our naval service. They began by sending letters to a few hundred retired personnel, seeking their support and direct input. Happily, over forty respondents provided personal anecdotes, ranging from one-page letters to career reminiscences worthy of publication in their own right. Many more people sent in notes, memos and old papers they thought might be of interest.

Encouraged by this early success the founders of this movement expanded and formalized their committee to become what is known today as the Canadian Naval Technical History Association. In the summer of 1996 the CNTHA produced its first newsletter as a method of establishing two-way communication (to solicit information from the community and to feed back some snippets in return). To date, the CNTHA has produced four newsletters which, along with complimentary copies of the *Maritime Engineering Journal*, have been sent to our nearly 300 members under the auspices of the Directorate of History and Heritage and our strategic partner, DGMEPM. As you can see, our newsletter is now happily situated in the centre of the *Journal*, a position we hope to occupy for many years to come. However, that depends entirely on the continuing support of contributors.

To all our new readers, we hope you find our endeavour interesting and we look forward to hearing from you.

Mike Saker

About the CNTHA

The Canadian Naval Technical History Association is a volunteer organization working in support of the Directorate of History and Heritage (DHH) effort to preserve our country's naval technical history. Interested persons may become members of the CNTHA by contacting DHH.

A prime purpose of the CNTHA is to make its information available to researchers and casual readers alike. So how can you get to read some of it? For the moment there is only one copy of the Collection, situated at the Directorate of History and Heritage located at 2429 Holly Lane (near the intersection of Heron and Walkley Roads) in Ottawa. DHH is open to the public every Tuesday and Wednesday 8:30-4:30. Staff is on hand to retrieve the information you request and to help in any way. Photocopy facilities are available on a self-serve basis. Access to the building requires a visitor's pass, easily obtained from the commissionaire at the front door. Copies of the index to the Collection may be obtained by writing to DHH.

Drop by. Give us a look.

Canada's First Nuclear Propulsion Option

The estimable Constructor Commodore R. Baker, on loan to the RCN from the Royal Corps of Naval Constructors as Naval Constructor-in-Chief (1948-56) was inclined to assert to those in Operations that, "It's not so much what you want as what we, in Technical Services, are able to provide." This exhortation was not always well received and it is interesting to see how it worked out in the case of an early Canadian nuclear propulsion option.

Nuclear propulsion was an enthusiasm of RAdm Brian Spencer (Chief of Naval Technical Services, 1958-1961). He had begun his naval service with the RN in (it is believed) the coal-fired *Emperor of India* and hankered after a career that would span the realm of fuel from coal to nuclear power. Serving first as Engineer-in-Chief (1955-57) he tried to persuade the Naval Board of the desirability of studying nuclear propulsion. Early in 1957 the Admiralty sought the RCN's interest for a joint team to work at the UK Atomic Energy establishment in Harwell. It seemed that a plant for a fast tanker would be appropriate to consider and by year end the team was in place.

Now indeed the operators were heard from, with regard to a need for Canadian submarines and with the surprising observation (no technical opinion having been sought) that the submarines could be built in Canada. Needless to say, Spencer allied himself with these aspirations, and by early 1958 the Naval Board generally agreed to the requirement for nuclear propelled submarines in the RCN, and to study the feasibility of manufacturing nuclear plants and submarine hulls in Canada.

By the fall of 1958 Spencer had become CNTS, and a Nuclear Submarine Survey Team (NSST) had been set up. Its membership included: Cdr(E) (later VAdm) R.St.G. Stephens, Cdr(L) (later RAdm) W.B. Christie, LCdr(L) C.R. Nixon (later DM/DND), Const. LCdr J.M. Ashfield and Lt(E) (later Capt) S.E. Hopkins. As well we were later joined by CNTS's first woman officer, Lt(W) R. Dwyer, and by Mr. W. Mayo from Dept. of Defence Production.

As for my own involvement I was an unknown quantity to Spencer, but as his deputy it was largely left to me to "get on

with it" as the team's leader. However, as a gentle acknowledgment that I knew little about submarines and even less about nuclear propulsion, I was sent to the UK to visit facilities and to attend the Senior Technical Executives Course at Harwell. So in mid-October 1958 the work of the (very technical) NSST began in earnest with the intent to finish in June 1959.

To say the least, we got off to a shaky start. For some time we were unable to contact the USN until a high-level meeting developed a "Means & Extent" agreement that would enable us to discuss relevant nuclear propulsion topics with the appropriate authorities. Meanwhile, we visited U.S. shipyards involved in submarine construction and canvassed proposals from shipyards and machinery power companies in Canada, all of whom were anxious to be considered. In all of this period I don't recall that we had any contact with Operations branches — we had more or less shunted Assistant Chief of Naval Staff (Plans) aside. Understandably VCNS demanded that we produce an interim report and that "ACNS(P) continue to co-ordinate the whole business." Alas, we took this rather lightly, particularly since there had been no evidence of any "co-ordination" from ACNS(P).

At any event, we proceeded with the work and produced our lengthy report (nearly 200 pages) by end-June 1959. As well, we prepared two supplementary reports dealing with the selection of shipbuilders and machinery contractors. Toward the end of July I made a report to Naval Board in which I reiterated our cost estimate of \$65M per boat, with an ongoing annual program expenditure of about \$50M and more than \$25M for logistic and training facilities.

Thus, in short, the RCN had indicated an interest in nuclear propulsion, the best opportunity being in submarines. The NSST had taken a year to study the matter and concluded that building nuclear-powered submarines in Canada was feasible but expensive. Naval Board's reception, though cordial and complimentary, was non-committal and they simply presented a submission to the Chiefs of Staff Committee urging approval in principle.

Undoubtedly the cost implications were very demanding, but a decision was

not helped by a visit in the fall of 1959 by the RN's Flag Officer Submarines who, perhaps with a view to selling British conventional submarines, spoke in very favourable terms of their continuing usefulness. This presumably contributed to an aide memoire to CNS in November 1959 which reviewed the pros and cons of conventional and nuclear submarines. It concluded:

Nuclear submarines are preferred but as long as cost is the main consideration, then the Service should be equipped with conventional submarines of proven US or UK design constructed on the basis of equal priority with surface vessels of the planned replacement program.

There appeared to be a turning point in March 1960 when the RCN reiterated to Cabinet Defence Committee its desire to introduce its own submarine service, but noted that a unit cost of \$65M "placed nuclear submarines beyond our reach without a substantial increase in the Naval budget." Not surprisingly, Cabinet Defence Committee accepted all this and so began the lengthy and tortuous deliberations that led, in 1963, to the acquisition of three *Oberon*-class submarines.

On reflection it does not seem to me that we in Technical Services were as judicious as we might have been. Certainly we worried away more or less successfully at a range of technical, logistic and financial problems and, in so doing, became submarine "experts" in a field that was not particularly crowded with relevant talent. But we ought to have had continuing access to operational experience relating preferably to underwater vehicles. Probably this would not have made any difference to the final decision, but it might have given the team rather more legitimacy in the eyes of Naval Board. However, it was all very broadening, and since the *Oberons* are still in service today the outcome was a good deal better than we might have anticipated — four decades ago.

S. Mathwin Davis Phd.D; Rear Admiral (Ret'd)

[Who were the Canadians, if any, who joined the team at Harwell? — *Editor.*]

A CNTHA Pilot Project

The CNTHA has begun to develop an extensive collection of documents, letters and anecdotes contributed by individuals in response to our request for ideas and information. Our curator, Phil Munro, has done a terrific job of sorting and cataloguing the information. While the documents have highlighted many significant decisions, events and projects that have affected engineering and technical developments in our navy since World War II, they also show that there are many gaps in our data base and that we have really only collected a very small portion of the information needed to accurately and justly portray our naval technical history.

Time is taking its toll of those who led us through World War II and set the stage for the postwar Canadian design and development of naval vessels. Recording their recollections is a high priority. We must accelerate the information collection process, which requires that the CNTHA become more proactive.

Our first task is to develop a timeline from 1945 to the present which correlates major policy decisions, ship design and acquisition programs, innovative system/equipment developments, and the people who participated. A pilot project will then examine a segment of the timeline, concentrating on one discipline, e.g. combat systems. Data will be gathered and catalogued, after which the process will be assessed and amended as necessary to drive the collection of outstanding historical information.

Activities will take place on three levels, with much of the work going on in parallel. The first level encompasses the development of a macro timeline of the major ship design, development, acquisition and update projects since WW II. The second level activity will expand on this, overlaying such aspects as the phases of

the projects, the introduction of major technical innovations, the key players, the organizations involved, the introduction of support and training facilities, and changes to the Supply system, etc.

The third level activity will involve the formation of a focus group to take a segment of the timeline, correct it, fill in missing issues and key decisions, identify sources of information and solicit coordinators to gather the data. Winding up this pilot project will be the evaluation of the process and its application to the remainder of the CNTHA project.

The success of the project depends on people like you. The CNTHA must capture the experiences of those of all ranks who have served and who are serving. It may be our so-called Canadian psyche, or just the innate modesty of naval persons, but people seem to be judging their own roles as insignificant. "I was just part of the team," they say, yet when they relate their experiences it is very clear that their contributions were far from insignificant (even though they arose during what some might have regarded as routine engineering and technical work). These memories are critical to identifying the people who participated and to whom credit must be given. This includes our uniformed and DND civilian personnel, as well as our other government department and industrial counterparts.

All information is valuable. When our team asks you about projects, events and people, please reach back into your memory and help as much as you can. Let the CNTHA judge where it fits into the overall picture. In the meantime, your letters, anecdotes and recollections are still much-needed and will be most welcome. Indeed, they are key to helping us flesh out the timeline and chart our course.

Jim Dean

Letters

Thank you for the invitation to sit in on your meeting of Feb. 18. The venue in the Bytown Naval Officers Mess and the discussions were reminiscent of the many meetings I attended there as Secretary to the Canadian Naval Aviation Technical History (CNATH) Project from 1992-96.

I was involved with the Naval Aviation Technical History Project in soliciting, collecting and processing material from contributors; coordinating material for processing as a manuscript; working with a publisher and printer; and marketing, selling, and delivering our final product "*Certified Serviceable — The Technical Story of Canadian Naval Aviation.*" It is with this background that I make the comments below.

The time frames of the two projects are different. The aviation history dealt basically with a 25-year period, late WW II to unification. The CNTHA must cover from WWII to the present, and hopefully be the genesis and catalyst for recording and archiving developments as they occur rather than having to retrieve material from ever fading memories.

The aviation history was fortunate to have the Canadian Naval Air Group, with chapters across Canada, as a network from which to solicit material and purchase the final product. Your project seems to be even more fortunate, as in addition to retired members you have currently serving personnel who have become involved. In addition, they can perhaps learn from the past. While new technologies are available and continue to develop, many of the problems of resources and politics will remain. How these were overcome in the past by determination and ingenuity may well provide valuable lessons.

The availability in archives of the material which you compile will enable researchers to produce papers for your and other learned journals and symposiums, articles for newsletters and content for training modules. It will provide data which could be published in book form of specific endeavors, or broad histories of

(Cont'd)

We'd love to hear from you...

If you have information, documents or questions you'd like to pass along to the Canadian Naval Technical History Association, please contact:

Roger Sarty, Senior Historian,
 Directorate of History and Heritage, NDHQ, MGen George R. Pearkes Bldg.,
 Ottawa, Canada K1A 0K2
 Tel.: (613) 998-7045/Fax: (613) 990-8579

We look forward to hearing from you.

Letters (cont'd)

various periods if someone wished to do so at a future date.

The Naval Aviation History Project found that anecdotal material (from not only naval and civilian technical officers, but from the chiefs, petty officers and other ratings who had to "make it work") can add a lot of background to the more formal histories and papers. These inputs should be sought, as many did not always see things the way the record might indicate.

Soliciting and then receiving inputs from volunteers can be a very long process. Commitments are always made with good intentions, however in retirement there always seems to be more to be done than when one was working, and targets slip to the right faster than an inter-departmental government project. I got the feeling there was a determined perseverance amongst your team that will result in the success of the CNTHA Project. Might even submit a bit myself!

In a recent meeting with Rolfe Monteith I learned that he plans a cross Canada tour in September. All those of his era who have not contributed as yet should be forewarned to do so, or have a valid explanation ready.

May the CNTHA Project exceed the Naval Aviation Technical History Project.

Those who become involved feel a well-deserved sense of achievement.

Yours aye,

G.S. (Gord) Moyer
LCol (ret'd) (former (E)(AE); 140-41;
AERE/MARE)

[Editor's Note: Committee meetings are open to anyone who wishes to attend. Call our secretary at DHH to determine when the next one is scheduled.]

(To LCdr Richard Gimblett)

I read with pleasure that you have been assigned the task you describe in the *CNTHA News* of December 1997. I may be able to help you in connection with the "lost years." I was on the staff of the Manager Electrical Engineering HMC Dockyard, Esquimalt from 1946 to 1948 and thence to the *Crescent* as Electrical Officer and made voyage to China and back in 1949. I was responsible for preserving the electrical gear in *Crusader* when she was paid off into the reserve fleet and I have a few anecdotes about that exercise.

The China cruise was one of the highlights of my early career; the way out and the way back; the mutiny in Nanking and as one of those ordered to appear before the Mainguy Commission I was pretty

close to the inside story. As I had a keen interest in sports, I played on the ship's fastball team and got to know quite a few of the men. Often over a beer after the game we would talk about life in the Navy of those times and their feelings about the future shape of the service and their ideas about how it should go. One of my retirement occupations has been to 'write up' my recollections of events in my life that made my career so fascinating and rewarding; I am enclosing a few samples which pertain to that period. If you find them helpful I would be pleased to dredge up some more. I think I might even recount the features of the very day of the mutiny. It was a memorable incident!

I look forward to hearing from you in due course.

Sincerely,

Melvin T. Gardner
7 Rue de la Sapinière
1340 Ottignies, Belgium
Email: melvin.gardner@infoboard.be

Sonar History: Help Wanted

I'm currently working on the history of towed sonar 1949-64. The main sources will be material in the National Archives, and there is some valuable material in the CNTHA collection already. However, I'd like to hear from anyone with sea experience with AN/SQS-504, particularly during its development and evaluation in *Crusader* 1955-60, in *Crescent* after 1960, and in the Improved *St. Laurent* class, *Annapolis* and *Nipigon* after 1963.

I'd also like to hear from anyone who worked with the late Colin diCenzo, the NDHQ project officer during the production of SQS-504 by EMI-Cossor, 1957 onward. All contributions are welcome, from a couple of paragraphs to a brief essay. (Similar information on SQS-505 will also be needed later, so feel free to send notes on that as well.) Please send your input to Phil Munro so that it can be acknowledged and indexed as part of the Collection, but get in touch with me directly at (250) 595-1867 if you have questions.

Hal Smith
Sonar Coordinator

The Collection

The collection now stands at 335 items, the most significant of the additions being a major contribution from Jerry Proc. Jerry is a volunteer in the *Haida* preservation group, and has made extensive research into the ship's radar, asdic, IFF and, most importantly, communications systems. Moreover, he has expanded the research into general shipboard fittings and operations both past and present. The result is a splendid compilation of naval communications history. It is available on the Internet under: <http://www3.sympatico.ca/hrc/haida> and subpages.

Another item of interest is the Engineering Officer's report of the grounding of HMCS *Huron*, 13 July 1953 in Korean waters. This report describes the efforts to refloat and effect damage control. It differs in some respects from the story in *Thunder in The Morning Calm*, a book about Canadian Naval Operations in the Korean theatre.

Any contributions from a single paragraph to a book can be sent to me directly:

- by mail: 673 Farmington Ave., Ottawa, Ont., K1V 7H4
- by fax: (613) 738-3894
- by E-mail as436@freenet.carleton.ca

Phil Munro