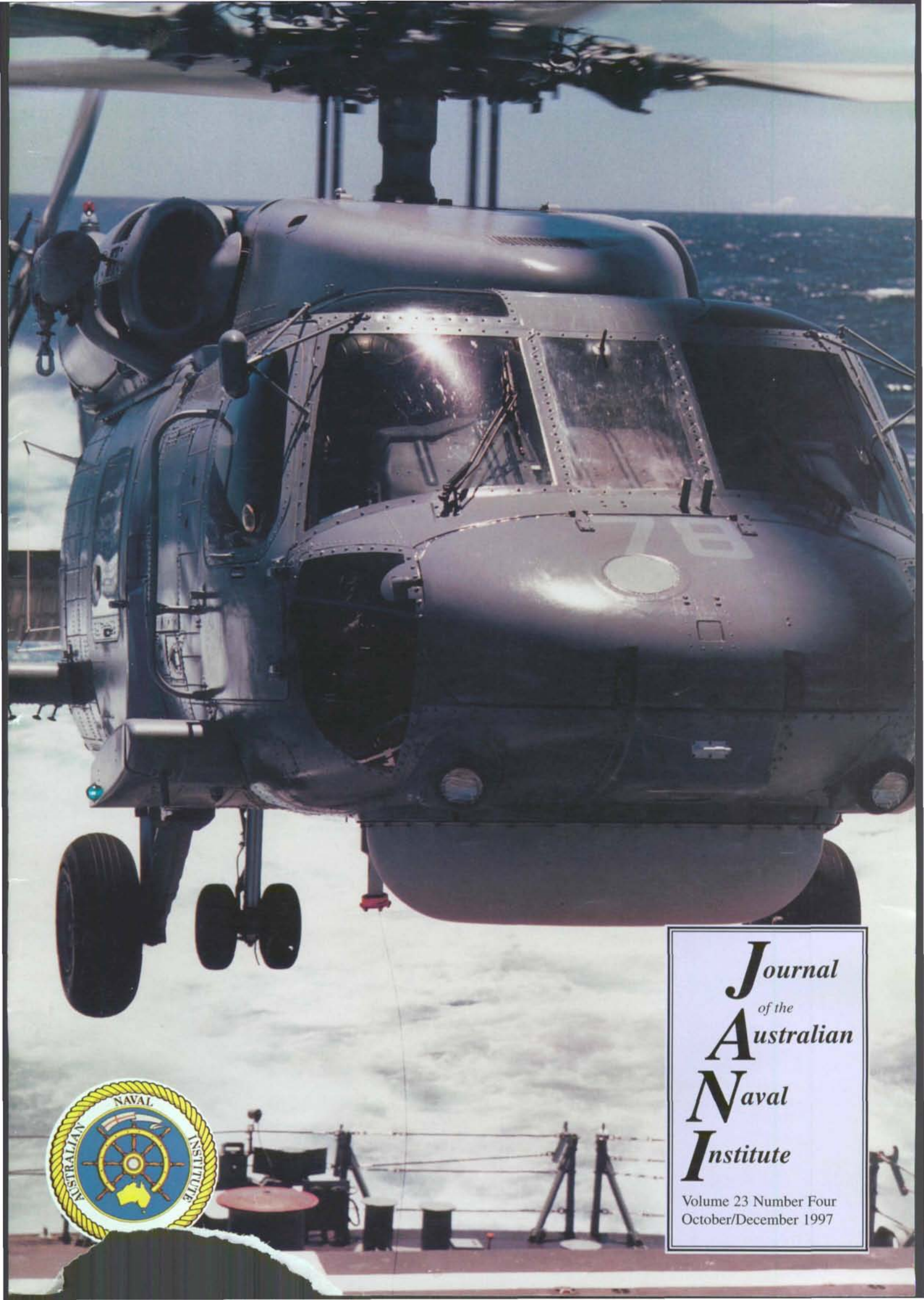

Journal of the Australian Naval Institute

Volume 23 Number Four
October/December 1997

AUSTRALIAN NAVAL INSTITUTE INC.

The Australian Naval Institute was formed and incorporated in the ACT in 1975. The main objectives of the Institute are:

- to encourage and promote the advancement of knowledge related to the Navy and maritime profession; and
- to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession.

The Institute is self-supporting and non-profit-making. Views and opinions expressed in the Institute's publications are those of the authors and not necessarily those of the Institute or the Royal Australian Navy. The aim is to encourage discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.

The membership of the Institute is open to:

- *Regular Members*. Regular membership is open to members of the RAN, RANR, RNZN, RNZNVR and persons who, having qualified for regular membership, subsequently leave the service.
- *Associate Members*. Associate membership is open to people not qualified to be Regular Members, who profess an interest in the aims of the Institute.
- *Honorary Members*. Honorary Membership is awarded to people who have made a distinguished contribution to the Navy, the maritime profession or the Institute.

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STYLE GUIDE

The *Journal of the Australian Naval Institute* welcomes articles and letters on any subject of interest to the Naval and maritime professions. In general articles should be no longer than 5000 words and should conform to the *AGPS Style Manual*. Spelling will be in accordance with the Editor's copy of the *Macquarie Dictionary*. Submission of a disk and hard copy is preferable. Enquiries, articles and letters may be directed to the Editor.

Journal of the Australian Naval Institute

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An RAN Seahawk about to land on using the RAST on one of the Adelaide *class frigates (ABPHOT D. McCorkelle).*

Rear Cover (Navy Photographic Unit)
Firing the 81mm mortar on a Fremantle *class patrol boat. Note the bins to retain plastics and other waste which cannot be safely disposed of at sea.*

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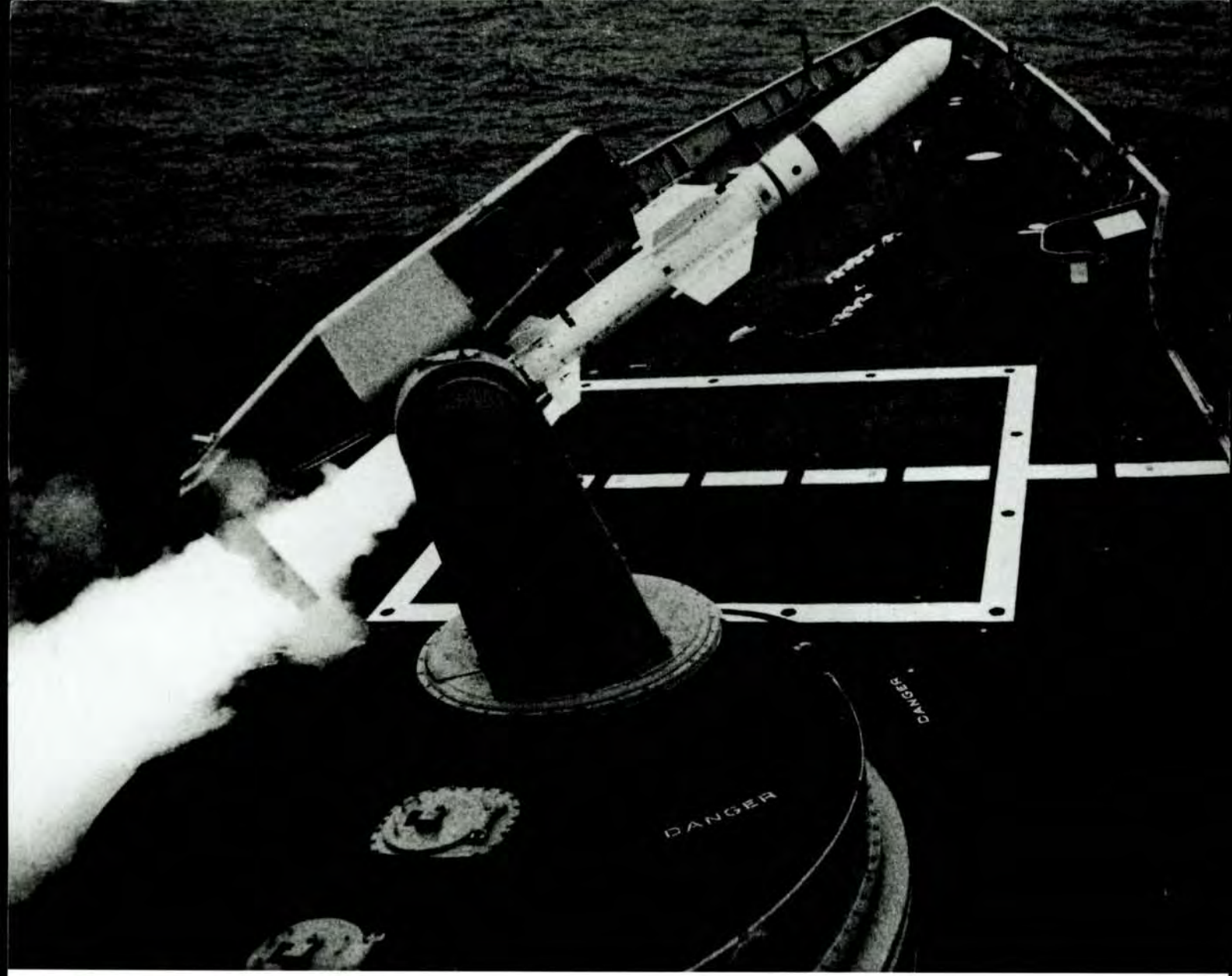


Firepower at sea - the new and the old.
Top HMAS Canberra *conducting the RAN's first Harpoon firing. Bottom: USS* Missouri *firing a full broadside.*

From the President ...

In the last edition of the *Journal* I raised the possibility that the Institute might make some radical changes to the way it does business and in particular to the way it produces the *Journal*. Since then these plans have been pursued by the Treasurer, assisted by the Editor, but unfortunately without success. The original problem, however, remains. The Institute's cash flow is unsustainably high and most of that is due to expenditure on the *Journal*. As the Council believes that the original plan is no longer practical, we are developing other options to address the problem and will present them at a combined Annual and Extraordinary General Meeting on Tuesday 24 March at 1900 for 1930 in Legacy House, Deakin.

These further options are currently being developed. I believe that input from the membership is a very important part of this process; this is your Institute. I would ask all members to consider the options outlined below and to contact a Councillor if they have any comments or queries.

The options broadly fall into three areas. Firstly, we can reduce expenditure on the *Journal* by reducing its frequency from four to three editions per year. This will obviously cut expenditure on the *Journal* by a quarter, freeing up those funds for other activities in pursuit of the Institute's aims. It may also help to improve the quality of the *Journal* by raising the standard of articles published. The second option is also related to reducing *Journal* costs, and that is to find a less costly alternative format. This could involve an A5 format and/or a reduction in the number of colour pages.

The third option being considered is to use an agency to obtain more revenue from the *Journal* by selling advertising space. This would result in a similar result outcome the plans I mooted in the last issue, but would place a greater workload on the Council. In this there might be scope for some retired members to take on a greater role in the Institute's affairs. I am conscious of the pool of wisdom which exists amongst the members who are no longer serving and am keen to find ways for the Institute to benefit from it. This is one opportunity and I would be glad to hear from potential volunteers. Remember that there is provision in the Constitution for retired members to become Councillors.

None of the options outlined above have been fully developed and they are not mutually exclusive. I intend that Council will develop a plan to be presented to members at the A/EGM, which will take the best elements of all three areas under consideration as well as any other ideas which arise in the meantime.

The Institute has an important role to play in the providing a forum for informed debate on matters relevant to the naval and maritime professions in Australia and New Zealand. This can never be more true than at a time when there is so much taking place. We should not be afraid to make changes so that we can pursue our aims in the most effective way.

Bill Dovers

From the Editor ...

The last few months have been somewhat frustrating as the Treasurer and I have attempted to put together a package to rejuvenate the manner in which the *Journal* contributes to the Institute's aims. Unfortunately that proposal does not look as though it will be possible. Some changes will however still be necessary, though they will not now be implemented all at once. The Institute cannot however lose sight of the need to find other ways of communicating its message and providing a forum for debate. Provision of a website which can facilitate news and discussion groups is I believe an essential prerequisite for the continued relevance of the Institute. The only way this will be achieved is to first reduce expenditure on the *Journal*, which consumes so much of the Institute's resources. In this matter we must not be bound by traditions which are unhelpful. I believe that the general direction of the changes being proposed by the Council will benefit the Institute greatly and will enable more members to participate in the Institite's activities than is currently the case.

This edition of the Journal contains, as usual, an broad range of subject matter. While I do not propose to summarise excellent pieces which you can all read, I would like to draw your attention to one. The interviews with Professor Geoffrey Till and Dr Ed Marolda were conducted at a conference on *Maritime Power in the Twentieth century: The Australian Experience*, which the Institute part sponsored. These two scholars are leaders in their fields and their opinions are thought provoking and interesting.

This is the last edition of the *Journal* for which I will be the Editor. I have enjoyed my term and learned much from it. My successor is Lieutenant Wendy Bullen who will take over in the New Year. I wish her every success.

Alastair Cooper

The Volume Number On The Last Edition Of Jani Was Incorrect.

It Should Have Read Vol. 23 No. 3.

The Treasurer Would Like To Wish Everyone Merry Christmas

And Remind All Members Whose Membership Expires In Decmber 1997 (12/97 Above Your Name On The Mailing Label) That Renewals Are Now Due!!

NOTICE OF ANNUAL AND EXTRAORDINARY GENERAL MEETING

The Annual General Meeting of the Australian Naval Institute will be held on Tuesday 24 March 1998 at 1900 for 1930 in Legacy House, Deakin.

Before proceeding with the business of the AGM, an Extraordinary General Meeting will be held to discuss options for the future direction of the Institute, the substance of which are outlined in the President's page of this *Journal* issue. The Council welcomes all input from members prior to and at the meeting.

ILLUMINATION ROUNDS

The Future For the Defence Academy

The Defence Academy has been the object of many people's attention throughout its short life. Most of that attention has been unfavourable, and although some of it has been justified, most of the criticism reflects more on those giving it than on the Academy. It should be realised by all, particularly politicians and academics who seek attention, that although the Australian Defence Force Academy is not perfect, it is a worthwhile institution more appropriate to the future than those which preceded it.

The Academy is a high profile institution, within Defence, Canberra and the broader Australian community. It thus becomes the focus for many petty jealousies within Defence: Navy and Air Force do not like it because it is too near Duntroon, the Army does not like it because it is not Duntroon. Those who went through the old single service institutions do not like it because 'things were always better in my day'. While most people would not agree with the sentiments as expressed above, they would be lying to themselves if they did not acknowledge that elements of them exist in the opinions expressed by themselves and others.

Within the broader Australian community, the Academy attracts attention because it seeks to chose and educate an elite to lead the military service. (This is not of itself unusual, as most large companies and the Commonwealth Public Service also use similar processes, although they are not usually concentrated into one institution.) By virtue of its location in Canberra, any failing at the Academy is immediately the subject of political scrutiny. Of itself this is not objectionable. But the competitive political nature of much analysis of Academy failings and the perceived need for immediate solutions makes the Academy subject to highly variable winds of change. To be blunt, to knee-jerk reactions and short term band-aid solutions, the results of which are rarely effective. But by the time this is evident the people who proposed the solution have moved on and so the institution itself is held to blame.

Academy graduates comprise the largest single group amongst the ADF's junior officers. To those who have not graduated from the Academy it is easy to imagine that this represents a closed society from which they are excluded. Such is not the case, though it is a danger which must be guarded against. Having people, Academy graduates and others, perpetuate 'ring-knocker' stories can only be divisive. Moreover, despite anyone's best intentions, there will always be members of this group who make mistakes, possibly bad ones, and others who are not good officers no matter what their background. Like Volvo drivers, it is very easy to condemn the whole based on the actions of a few. This is hardly a logical exercise. Similarly, one of the urban myths that exists in the ADF is that junior officers are not as good as they used to be. Well, senior officers have been complaining about the quality of junior officers for at least one hundred years, probably more. When today's senior officers were junior officers, people were complaining about them as well. But as I am sure we would all agree, they seem to have turned out OK, so maybe there is hope for the current crop as well.

Finally we come to the most immediate concern for the ADF: the fact that junior officers do not seem to want life long careers in the ADF. Despite the nature of the ADF recruiting campaigns, people still express surprise that junior officers are not 'as committed as they were'. These concerns are usually manifested in arguments that the ADF is not getting a good return for its investment because Academy graduates serve only the minimum ROSO and then get out. Such observations are usually based on anecdotal evidence at best and unfortunately prejudice at worst. Again, because of its high profile, the Academy becomes an easy scapegoat for other more insidious problems. It is more difficult to address poor personnel management practises perpetuated over many years by people who do not accept that society is changing. If, as many argue, tertiary degrees are only offered to junior officers after five or so years in the service, there will not doubt be short term savings, followed by decades of utterly adverse consequences. The first of these will be that fewer and less suitable people will join. Tertiary education is a prerequisite for an increasing number of professions and the ADF should not be regressive in this respect. Of all the three services, the RAN justifiably has the worst reputation for its attitude to education and intellectual pursuits. We cannot afford to undo the good work which has been done.

The Academy is not perfect, that is obvious to all. It is however, easier to rip down than to build, easier to destroy than to create. Those who comment on the Australian Defence Force Academy should bear that in mind and those who listen should use it to judge the comments offered.

The Book of Jointness

The generations of Command and Control Warfare, as told by the prophet Toffler.

In the beginning, there was Hand-to-Hand Combat. And the sons of Hand-to-Hand Combat were Rock, Spear, and Sword Warfare. And it was good. And the morning and the evening were called the First Wave, or Agrarian Warfare.

Sword Warfare begat Mechanised Combat. And the sons of Mechanised Combat were Combined Arms and Chemical Warfare and Radio Counter Measures. And Radio Counter Measures begat Electronic Combat. And the sons of Electronic Combat were Electronic Warfare; Command, Control and Communications Counter Measures and Suppression of enemy Air Defenses.

Now the sons of Electronic Warfare were Counter Measures, Counter-Counter Measures and Support Measures. And it was good. And the morning and evening were called the Second Wave, or Industrial Warfare.

On the third day, all hell broke loose. Electronic Combat went into the tent of Technology and knew her. But Command, Control and Communications Counter Measures also lusted after Technology and went into her tent and knew her also. And it was very good. And so it was that her days were accomplished that she should deliver her child, and she wrapped him in strange words and laid him in a paradigm. And they called him Command and Control Warfare, for they knew not who his father was, Electronic Combat or Command Control and Communications Countermeasures.

And wise men came from the Joint Staff bearing gifts. And they gave him OPSEC, PSYOPS, Deception, Electronic Warfare and Destruction. And Electronic Warfare kicked out all his sons and begat new sons. And the new sons of Electronic Warfare were Electronic Attack, Protect, and Support. And the morning and evening were called the Third Wave, or Information Warfare.

Now let me tell you as concerns those events that are yet to come. Fire will fall from heaven and consume the house of Suppression of Enemy Air Defenses. And the family of Suppression of Enemy Air Defenses will scatter before the fire, and gather to the tribes of Destruction and Electronic Attack. And they will lose their name for all generations.

Verily, I say unto thee, all now be renamed under the umbrella term Information Operations, and do spread this gospel of warfare without killing. And lo, it is politically correct.

Letter to the Editor

Dear Sir.

I was delighted to see Tim Duchesne's courteous comments my "Battleship Mentality - Revisited". But I am concerned that he appears to think I am opposed to submarines in the RAN inventory. Not at all. Indeed the first sentence of his last paragraph gets to the nub of the matter when he writes, 'Submarines may not be the defence panacea which apparently fears many in the community believe them to be.'

The trouble is that in politics perceptions are more important then realities. And it is the public perception of the overwhelming importance of submarines which I was attacking. Tim may not recall a Naval Symposium in the mid-seventies when CNS asked us to comment whether the RAN needed submarines or aircraft carriers, and I said that it was the wrong question because we needed both submarines and aircraft carriers. I am glad to see that Tim agrees with me on that.

As for the rest of his comments, the idea that submarines are needed for sea denial in the sea-air gap is again a popular perception, but not my preferred operational use of our submarines. And, on a matter of detail, I am well aware of the schnorkel but I regard the use of that device as surfacing because, in mid-April 1945 while serving in HMS *Vanquisher*, a German boat using its schnorkel was seen (about midnight) and subsequently sunk. LRMP and surface ships have been known to obtain radar detection on schnorkels. Accordingly I do not consider that the use of the schnorkel as a way of avoiding surfacing when, clearly, part of the boat is on the surface.

I will take seriously Tim's suggestion about raising consciousness about the need for fixed wing naval aviation.

Yours sincerely,
Alan Robertson

Reserve Officer Listing in *The Navy List*

Officers who wished to remain on the Retired List are required to maintain annual contact with Navy Headquarters. In recent years this practice has not been enforced resulting in the details of deceased of officers being published in the Navy List. This has caused considerable angst to family members and embarrassment to the Navy. We are attempting to reintroduce this practice to overcome this problem and to purify the information contained in the Retired List.

As you will recall, prior to completing full time service you were advised to keep DNOP informed of your contact details. For your continuing inclusion in the Retired List you will need to write to SO Records at the address below before 1 March each year. Officers who do not contact SO Records before 1 March 1998 will not appear in the Retired Lists of the 1998 Navy List.

Staff Officer, Records
DNOP
D-3-09
Russell Offices

Merry Christmas

As a result of an overwhelming lack of requests, and with research help from that renowned scientific journal SPY magazine (January, 1990) - the production team of the Australian Naval Institute are pleased to present the annual scientific inquiry into Santa Claus.

1) No known species of reindeer can fly. BUT there are 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not COMPLETELY rule out flying reindeer which only Santa has ever seen.

2) There are 2 billion children (persons under 18) in the world. BUT since Santa doesn't (appear) to handle the Muslim, Hindu, Jewish & Buddhist children, that reduces the workload to 15% of the total - 378 million according to Population Reference Bureau. At an average (census) rate of 3.5 children per household, that's 91.8 million homes. One presumes there's at least one good child in each.

3) Santa has, 31 hours of Christmas to work with. This is due to the different time zones and the rotation of the earth, assuming he travels east to west (which seems logical). This works out to 822.6 visits/second. This is to say that for each Christian household with good children, Santa has 0.001 seconds to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining presents under the tree, eat whatever snacks have been left, get back up the chimney, get back into the sleigh and move on to the next house. Assuming that each of these 91.8 million stops are evenly distributed around the earth (which, of course, we know to be false but for the purposes of our calculations we will accept), we are now talking about 1.3 kilometres/household, a total trip of 9.2 million kilometres; not counting stops to do what most of us must do at least once every 31 hours, plus feeding & etc. So Santa's sleigh must be moving at 1007 kilometres per second, 3,000 times the speed of sound. For purposes of comparison the fastest man-made vehicle on or near the earth, the Space Shuttle, moves at a poky 42.3 kilometres a second. A conventional reindeer can run, tops, 40 kilometres per hour.

4) The payload on the sleigh adds another interesting element. Assuming that each child gets nothing more than a medium-sized lego set (1 kgs.), the sleigh is carrying 321,300 tons, not counting Santa, who is invariably described as overweight. On land, conventional reindeer can pull no more than 150 kgs. Even granting that "flying reindeer" (see note.1) could pull 10 times the normal amount we cannot do the job with 8, or even 9 reindeer. We need 214,200. This increases the payload - not counting the weight of the sleigh - to 353,430 tons. This is four times the weight of the ocean-liner Queen Elizabeth.

5) 353,000 tons travelling at 650 miles/second creates enormous air resistance. This will heat the reindeer up in the same fashion as a spacecraft re-entering the earth's atmosphere. The lead pair of reindeer will absorb 14.3 QIJINTILLION joules of energy. Per second. Each. In short, they will burst into flame almost instantaneously, exposing the reindeer behind them, and create deafening sonic booms in their wake. The entire reindeer team will be vaporised within 0.00426 of a second. Meanwhile, Santa, will be subjected to centrifugal forces 1/,500.06 times greater than gravity. A 150 kg. Santa (seems ludicrously slim) would be pinned to the back of his sleigh by 2, 167, 007 kgs. of force.

If Santa ever DID deliver presents on Christmas Eve, he's dead now.

Interviews with Professor Geoffrey Till and Dr Ed Marolda

The ANI sponsored the conference on Maritime Power in the Twentieth Century: The Australian Experience, run by the RAN Maritime Studies Program. During the conference JANI spoke to two of the overseas speakers, Professor Geoffrey Till, Dean of Academic Studies at the British Joint Services Command and Staff College, and Dr Ed Marolda, Senior Historian at the US Naval Historical Centre.

Interview With Professor Geoffrey Till 18 July 97

JANI

Professor Till, there has been a lot of debate in Australia and around the world in the last 20 or 30 years on the role of small to medium carriers in naval warfare. Do you believe they have a future in the 21st century?

Professor Till

Yes I think their future is self evident, they are becoming so popular. One can think of lots of examples of countries that are going for them, Spain Italy in a curious kind of way. Thailand obviously. They provide some of the capability of big fleet carriers to countries who obviously can't afford them and they provide a whole series of possibilities that Navies can use for a different functions. That might include supervision of bigger Exclusive Economic Zones, anti piracy activities if that's what you think the Thai Navy's for. Projection of power ashore in a limited sort of way. I think it's always a mistake to assume that just because you can't afford the best, you can't afford anything.

JANI

One of the arguments used against them is that they don't provide a cost effective form of air power and that land based air power will always be more cost effective.

Professor Till

That's an interesting one. I tend to be averse to making sort of large scale generalisations one or another on almost anything. But in effect if you look at maritime air operations in the Adriatic for example you can see that they're complementary with land based operations rather than either better than or not needed. The examples that one would give are the very quick reaction times that British Sea Harriers for example operating off the *Invincible* can respond to situations when the troops ashore get into trouble and need some help of a specific sort. They can also have the advantages over land based air bases in Northern Italy for example if they get fogged in, which they do with monotonous regularity. And the *Invincible* can simply steam about in the Adriatic and find a bit of clear weather and operate its aircraft from there and they've done that many many times. It's not to say that since the *Invincible* was there we don't need the land bases in Northern Italy, we obviously do for lots of roles, but they're complementary, not an alternative.

JANI

In the South East Asian region there are a lot of Air Forces which have a considerable capability particularly at a short range. Do you think that might limit the use of small to medium aircraft carriers in hot war situations?

Professor Till

Well yes. I mean if you actually specifically talk about hot war situations, you're immediately narrowing the range of things that they might be useful for. Aircraft carriers are largish anyway. Surface units and carriers come complete with a range of possible uses. And their role in hot war, however you define that, whoever it's against, is just one part of the range. And there are all sorts of other things that they might be doing that, are equally useful that may actually appear quite an important justification for having them in the first place. So in a sense you have to think about the question. What aircraft carriers do is to provide you with a whole range of instruments that the diplomats can call upon should they ever need them. Some of them apply to hot wars, some of then don't.

But anyway getting onto the specific question you asked. Obviously, if you're in a situation where you're operating a small carrier with a few Sea Harriers or something against a first class Air Force, land based with all the apparent advantages that gives, you're going to have a difficult time if it's put as baldly as that. But one has to bear in mind that In South East

Asia you're not very far probably from your own land based aircraft too. You're not very far away from allies. It may well be that the situation in the country that you're concerned about has its own internal problems. One thinks of the vulnerability of air bases to guerilla attack and things like that. It depends, it depends, it depends on all the details and all the circumstances of the scenario you come up with. But I could imagine situations in which the vulnerability of a sort of a light fleet carrier might not be as great as you might imagine.

JANI

One of the situations that many of the Hawks, particularly in the United States are talking about these days is a hot war with China. What sort of credence do you give to the views of people on China who believe that they are after some kind of Asian or even world hegemony?

Professor Till

I'll make two points about that. The first one is. It depends on what you think of China as a country first. And there are all sorts of schools of thought about China. One is that they are indeed a sort of super power in the making with aggressive and assertive designs on the rest of Asia. And this tends to be a view that actually some of their smaller Navies sometimes have in the dark small hours in the morning and you can see why they do in the light of rather old fashion nationalistic approach that they take to everything ranging from what they think the Philippines are doing on Mystic Reef, or were doing. The Taiwan Straits crisis last year. The angry rejections they always give of international criticism of their human rights record and stuff like that. You can see that there's plenty of evidence that you could interpret to mean that they are a super power, or intending to become so.

On the other hand there's another school of thought that argues with equal credibility I think that in effect they're a country that needs to trade. That want to be most favoured nation with the United States that needs Japanese capital, Japanese expertise, Western capital, Western expertise, but they couldn't even extract any oil from the Spratley's if ever any is found without Western help. So they're critically dependent on being involved in the international trading community and that's very hard for them to reconcile with them being an aggressive militaristic type of power. And effectively what one's seeing is China wanting its proper role which is to be a great power with due deference from other people in the area, but not necessarily an aggressive one, s stamping out other people's rights and tribulations. And it seems to me that there's plenty of evidence to suppose that's the view.

There's a third view which is China is a threat, not from deliberate design, but through consequence over its own potential weakness. It might well fragment. That is the classic historical pattern almost like an Omega, a sort of concentrating power on Beijing as a centre of a vast hierarchical empire in periods of strength and in periods of weakness the bits around the edge fall off as it were, that's the sort of war lords model. They may be coming up to one of those periods with the huge economic disparities there are in various parts of the country. A lot of fragmentation between the old guard if you like and the new modernised parts. The big difference is between the interior and the coastal regions. Not many people argue that the old cement that the Communist party used to provide is being steadily undermined a by corruption and modern capitalism. So you can read it either way. And it seems to me that there's lots of evidence for it because there are various schools of thought within China. It's wrong to suppose that China is a kind of black box with a single view, a single ambition. It isn't: it's a great collection of different interest groups and the way they play at defence.

And really now to get on to answer your question. It seems to me that this may well play out in their maritime field as much as anything else. I think one can see evidence of a sort of heavy hard line elements within the Chinese Navy. They certainly do talk in very strong terms about the use of navies in the Taiwan Straits crisis and dispute of the South China Sea. There is lots of talk about acquiring aircraft carriers and all the rest of it. And yes, there is evidence of that sort.

On the other hand you also see plenty of evidence even inside the Chinese Navy that says the opposite. That they simply want to protect their Exclusive Economic Zones. They've got disputed island issues with Japan as well as the South China Sea and it's only right and proper that they protect something as important to them as their coastal waters. So there's that aspect to it, and their coastal waters are actually quite big. Therefore to do that they need to defend themselves and defend those waters. And when other people sail their aircraft carriers through areas of concern to the Chinese they may need to keep an eye on them. For that they need the Navy. Then it seems to me that that's a very reasonable set of arguments and that might well be the real motive. But I think the bottom line is that nobody designing a navy or producing a navy has only one single idea of what they want to do. You produce navies because they provide you with options. Which options turn out to be the most valuable in the future it's very hard to predict. You just produce a general purpose one and I think that's what the Chinese are doing.

JANI

It has been a continuing desire of the Royal Australian Navy is to produce a balanced fleet throughout the post World War Two era. Of course, the main purpose of that as you say is to give a government credible options. How much would you see the Royal Australian Navy being required to act on its own in the higher level contingencies in the future?

Professor Till

I think there's a universal trend, which even applies to the United States for political reasons though it doesn't apply to some for technological operational reasons, which says that in effect a single nation action is becoming less likely. Certainly single nation action that's associated with peace support operations of any sort, mandated or not by the United Nations are becoming increasingly armed lightly. That being the case, I think the bulk of naval activity around the world from now on will tend to be multi lateral. Often as a result of adhoc alliances formed just for the purpose of doing whatever it is they're doing which requires high levels of interoperability, lots of exercises, co-operation in procurement and all the rest of it. I think what might have been a common place model in the 19th century, what you might call a sort of naval nationalism. Of saying, in effect, we must procure everything we need ourselves. Possessing the full spectrum of naval capability is getting increasingly difficult even for the super powers to afford and certainly for medium and small countries. This applies to European nations and I think it applies to Australia too. So my sense is that although everybody wants a balanced force, they're becoming increasingly difficult to procure in the wider sense of that word. Balance is one of those wonderful words which means more or less what you want it to mean. And I think it will become increasingly narrow in its definition as far all the world's countries, but certainly medium and small ones are concerned.

JANI.

Professor Till thank you very much.

Interview With Dr Ed Marolda Friday 18 July 97

JANI

Dr Marolda, what would you say were the main legacies of the Vietnam and Korean Wars for the US military today.

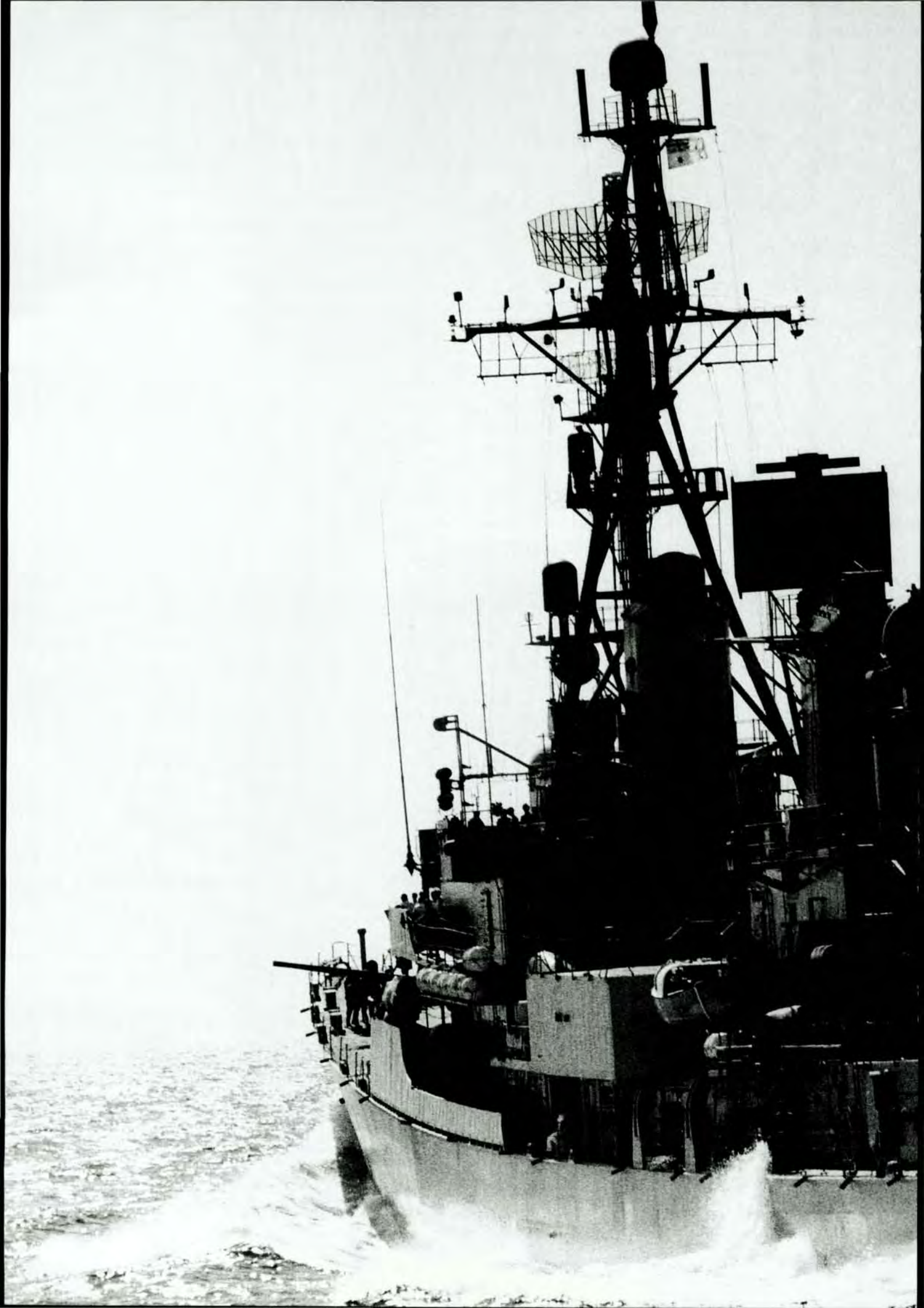
Dr Marolda

I would say that the Korean war and the Vietnam war, the impact that they have had on US Naval activities in the 1990s and potentially it would have on other Navies, the Royal Australian

Navy as well as others. First of all we learn from those two experiences of the importance of sea power to the Western alliance. And that is in the protection of our force through another that is deployed ashore, the ability and the need to keep them supplied and the sea is vitally important in that regard. And if things go wrong which they did in Vietnam the ability to bring those forces safely out with a minimum of loss. Some of the other things and I think it's important to stress that in the Vietnam war. The people who are commanders in the Persian Gulf war almost to a man were young officers in Vietnam. And they took away from that experience some very valuable lessons. There's an old sore that warriors fight the last war and the result is that they screw up the current one. But that was not the case. Our Commanders in the Persian Gulf learned from their Vietnam experience in spades.

And I can give you just a few examples. All of them felt very keenly the need to limit casualties on our side. That you did not needlessly risk the lives of the men and women under your control. Only when you had to would you take that step. There were no suicide missions that people were sent out on in the Gulf war. Another thing was the need to use discriminate force and that is, only that force that is necessary to achieve your objectives and that does not mean you kill everyone of the enemy soldiers you can get your hands on, or destroy everyone of his facilities. You destroy only those things that can harm your operations and you trying to advance your object. For that reason and the political side is very important and that was gained from Korea and Vietnam that you're fighting as part of an international coalition. You are trying to keep the support of your own population behind the war effort and the support of the world opinion behind your effort. We didn't do that in Vietnam, though we did it in spades in the Persian Gulf war and we learned that lesson. Americans are quite often in, because of the preponderance of forces are in a position to lead.

And I think another lesson of Korea and Vietnam is, our leaders learned not to be domineering, or not to come across as arrogant. You know, tried very hard not to come across as arrogant and not overwhelm our allies. They should be part of every operation and given a proportion of responsibility. As an example, the US military has often been criticised for overwhelming the South Vietnamese defence effort. And with consequence that the South Vietnamese lost a lot in terms of morale and the fighting spirit and pretty much took a back seat and said. The United States will take care of it so we don't have to work too



HMAS Hobart *at sea and at work.*

hard. That had very damaging effects when we had to withdraw. They weren't as capable as they could have been for the fight. Let's see, what else. I'm giving you a whole paper here on question number one.

JANI

In terms of coalition warfare then obviously the United States has learnt a lot from that and one of its partners as it's learnt about coalition warfare has been Australia. Can you ever see times when Australia would be acting without US assistance, or acting at times other than in concert with the United States?

Dr Marolda

I would say yes. And a wise nation should prepare for those instances when for one reason or another they will be acting alone or they will be acting with only a few other allies. The chances are minimal in a major conflict that Australia for instance would not have alliance support. But you can't depend

on that. So there should be each nation and its forces should be in my view multi capable where they can attain a level of performance without any other nation being involved.

JANI

Balanced against that there's been the argument military forces are becoming so expensive that no nation is going to be able to have a completely balanced force and that by pursuing warfare in coalitions, different nations will provide different specialist skills and the United States now has muted at some stages in the last couple of years the idea that they would provide the intelligence and the Command and Control systems to facilitate other.

Dr Marolda

I say, it may be the trend, but I think that it's a wrong trend. I think it's a wrong direction and I'll just give you two experiences. The United States felt it important to defend the Republic of China against the PRC for many years. And that was not supported by any other major country. It was basically a unilateral US action. Another example is in the Gulf War itself where the United States fought in any kind of operation with the Soviets, or even our adversaries in the Far East. That if it came to war that our allies would take on responsibilities of anti submarine warfare and mine counter measures. Now we thought that our NATO allies would pick up the ball with mine counter measures and they did. I mean, they trained and the developed the forces to do that. Our mine counter measures sweep was very poor and in the Gulf war that came to haunt us. Our ships were not up to par, our training was not up to par and we had a long learning curve to get onboard with that. Now in that instance our allies did come to the fore and help us out, but you can't depend on that. It's just my view that there will be operations where we won't have the support of other countries. Coalitions are a political element. They depend on politics and politics is fickle. One day's friend is tomorrow's neutral.

JANI

With that in mind, how do you see Australia's force structure developing in the next 15 to 20 years, given the various competing demands of having to provide balanced forces in land, sea and air environments?

Dr Marolda

Well I would say that one thing is very important and from what I've seen here in my two weeks, the Australian armed forces are getting closer together in terms of their thinking about getting into the joint activity, joint weapons, joint support. This is something that's happening all over the Western world. And it's happened in the United States Armed forces as well, spurred on by the Gulf war, especially in terms of the US Navy. That got the Navy, where it was paying lip service to jointness before in my opinion. They're really onboard at this point. I think that definitely is the future for military forces and Australia's in particular, because costs are increasingly prohibitive. We can't afford in my view five different medical systems, or various backup or support systems that are basically doing the same function. Now I don't know that I would make that argument for combat forces, because there you often benefit from a redundancy in weapon systems or types of forces. You can't always predict what you're going to need in particular. That's called creative competition. You need some competition b between the different combat types. But I think joint control of operations is definitely the way to go in terms of military efficiency and getting the best use out of the resources.

JANI

Dr Marolda, thank you for speaking to us.

An Essay On The Relationship Between Sea Control And Contemporary Maritime Strategy.

Is Control Of The Sea Still In Dispute?

Lieutenant Commander J. Manson, RAN

Introduction

Current USN strategy assumes that it has won sea control on a global scale and that it must now concentrate on acquiring the means to project power ashore. This strategy has become known as "From the Sea" and has given rise to a host of new naval missions collectively called "littoral operations". Despite making the claim that it has won sea control the USN still concedes that it must have the capability to continue to assert sea control for its new strategy to be effective. This raises serious questions about the nature of sea control and its role in strategic planning. Issues about the degree to which it must be achieved, the choice of method employed to achieve it and for what period of time it must be asserted all have wide ranging implications about the way in which the USN, or any other navy, apply the benefits of sea power in support of a well-articulated maritime strategy. Although sea control is now a universally recognised concept it is important for navies to be clear about the way it actually shapes how they go about their business. Sea control is something that is neither sought nor asserted consciously on a day to day basis. Instead it is a concept which allows navies to assess their potential to use sea power to achieve strategic objectives.

Notwithstanding the practical difficulties of establishing control of the sea, the concept is fundamental to all maritime strategies and, as such, its usefulness is far reaching. Developed after WW2 sea control is a flexible and comprehensive concept that accurately describes the ways any navy can use the maritime power inherent in its force structure. Consequently, any navy can claim the ability to exercise a degree of sea control for some period of time in a particular location. However, it is one thing to possess sea power in naval forces and another to develop a maritime strategy that effectively captures the benefits of that power. The key issue for all navies is differentiating between sea control and maritime strategy. The former describes the business of naval warfare while the latter demonstrates a national understanding about how to use the navy in the first instance. Clearly the articulation of an achievable maritime strategy shows far greater potential than simply making statements about the ability to seek and assert sea control.

The question about the importance for medium and small navies to seek and assert sea control is largely irrelevant. The subjective nature of sea control is such that it will always be disputed and therefore, navies should concern themselves with the benefits that can be derived from understanding its potential It is more fundamental for navies to exercise sea control within the framework of a well articulated strategy that exploits the advantages of sea power than worry about who will challenge them. In order to substantiate that statement this essay will examine the concept of sea control in order to see what part it plays in developing contemporary maritime strategy.

This aim of this essay is to examine the concept of sea control and discuss its part in modern strategies such as that defined by the USN in order to show that all navies have an inherent ability to assert it.

The scope of this essay will be limited to examining the fundamentals of sea control in order to explore its usefulness in contemporary strategic planning. From this it will be possible to show that the nature of sea control is such that any navy can lay claim to having the ability to establish it to some degree or another. Having done so, the concept can also be used as the basis for formulating plans and force structures. This essay will show that while it will be necessary for navies to be able to seek and assert sea control as part of their routine business it is important that they do not mistake that ability as a maritime strategy in its own right. The nature of sea control and the latitude of the concept is such that it will always be disputed and, therefore, this essay proceeds on the basis that it is futile to argue about whether or not any navy actually controls the sea.

Sea Control

Prior to the concept of sea control maritime strategists expressed naval power in absolute terms. Concepts like "Command of the Sea" were used to attempt to describe how great maritime powers dominated the world's seas, attempting to control them for whatever purpose they intended. Many historical strategists were compelled to express the role of sea power in terms of the ability for a navy to seek out and overrun an opponent, thereby securing the sea for one's own purpose. The historical school of maritime strategy is littered with ideas about how it was necessary to

annihilate the enemy so that ones own navy could operate with complete freedom anywhere and at any time. By the turn of the century it was quite obvious that not only had any navy ever achieved command of the sea it was highly unlikely that any navy ever would. Therefore, it was necessary to look for new ways to describe how navies could exercise the use of sea power in support of strategic desires. Clearly there was a need for less dogmatic and rigid concepts.

The origins of the concept of sea control can be traced back prior to WWI when maritime strategists shifted the focus of the study of sea power away from historical analysis. In place of absolute concepts came ones that described the importance of sea power in more practical and useful terms. Fundamental to such thinking were ways that universally described how navies applied sea power. Sea control is such a concept and was refined in the US after WW2 by Admirals Eccles and Stansfield Turner who were involved in the very practical task of establishing the USN's post war force structure

Sea control is defined as the ability to operate naval forces with a high degree of freedom to complete a task or mission in support of a national strategy. At no stage is the concept limited to forces of a particular size or structure nor is there any limitation imposed by time and space. Therefore, the principles apply equally to all naval forces regardless of their mission. Any navy, regional or otherwise, can lay claim to the fact that for a task that is within the capability of its existing force structure it can assert a degree of sea control that will enable it to operate with a high degree of freedom. Since sea control is a concept rather than a strategy it simply doesn't matter what the mission might be.

Many believe that the key point about sea control is establishing the right to use the sea, or a limited part of it, for one's own use. This is not necessarily so. The critical criterion in deciding if one has control of the sea is that friendly forces must be able to conduct their mission with a high degree of freedom. This adds an interesting twist to the entire concept. Unlike the concept of command of the sea, sea control does not necessitate absolute control. Indeed it is possible to establish a strategy of sea control that relies on restricting the freedom of the adversary and thereby preventing him from achieving his mission. This is called sea denial. Whether one wishes to use the sea for one's own purposes or merely elects to deny the use of the sea to an adversary is completely up to the individual concerned, and in no way negates the fact that sea control has been asserted.

Sea control therefore, is a flexible concept with two components, namely sea use and sea denial that may be limited in such that it is possible for a navy to accomplish a particular task or mission. Furthermore the key to successful sea control is creating a situation where friendly forces can operate relatively unhindered, thereby being free to dictate the operational tempo. What then is the role of such a concept in contemporary maritime strategy?

Sea Control and Contemporary Maritime Strategy

Although modern strategies may be more practical than their predecessors they still need great detail to make them work. Written for the purpose of building arguments about the ways in which sea power will be acquired and operated, modern maritime strategies must not only be understandable but must also possess a means by which to judge their effectiveness. In every strategy there must be a common measure to link it to other strategies in order that the benefits of one can be gauged against another. To that end strategists developed descriptive concepts that could be applied across the entire spectrum of maritime operations and missions. Sea control is such a concept and because of its flexible nature is ideal in describing how maritime power can be used in any naval missions. From the principles of sea control it was then possible to ascertain what forces were required for a mission and to make comprehensive plans to complete it.

In the resource limited environment of the latter half of the 20th Century the argument that "we have always had a Navy" was insufficient to continue having one. Instead there was a growing need to justify the benefits of military forces in quantifiable terms that allowed them to be readily compared alongside every alternative. One should not lose sight of the fact that consultative diplomacy is far cheaper than gunboat diplomacy, particularly for those nations who cannot easily identify a military threat. Without a means of determining the exact benefit of military power it was not possible to secure a future for it in a highly competitive environment. Therefore, the importance of concepts common to all strategies cannot be over-stated as they ultimately become the measures by which the acquisition of forces is justified.

The concept of sea control is particularly useful in developing arguments to support the allocation of whatever resources might be necessary to acquire sea power. It is sufficiently broad to be applied to any situation yet is also definite enough to be used in measuring the effectiveness of the forces and plans needed to achieve success. Sea control can be applied to any maritime scenario and while the forces, scope and timing may vary the fundamental elements are fixed. This allows planners to select any combination of forces within the constraints of whatever restrictions might be imposed. Likewise it is possible to express any requirements beyond those imposed by

prevailing circumstances in terms of penalties. With concepts such as sea control it was possible to construct arguments about cost per capability trade offs and show just what could be achieved for the expenditure of varying resources. This type of process has become fundamental to the strategic appreciation process in most countries where the military competes for its survival and is accountable for the resources it uses.

In summary, concepts such as sea control play an important part in contemporary maritime strategy as they form a basis for describing exactly how a particular mission or role can be achieved with specific forces. By analysing a maritime strategy in terms of a series of tasks requiring forces for either sea control or sea denial it is possible to determine an adequate force structure and develop detailed plans for it to be executed. Therefore, in the broadest terms, sea control is a means of linking an endorsed maritime strategy to the processes that define the details to make it work. In turn the strategy itself is a means of enunciating clearly and concisely the role maritime power has to play in meeting the national objectives required to secure goals and objectives.

Seeking and Asserting Sea Control

Previous sections have established what sea control is and have shown its role in contemporary maritime strategy. It has been shown to be an effective and accurate description of the ways that navies apply sea power in the normal course of undertaking either naval warfare or naval diplomacy in support of national objectives. Similarly it is sufficiently versatile to be used as an accurate measure of the effectiveness of competing force mixes and hence, is a vital tool in the force development process. The universal nature of the concept then leads to the conclusion that all navies are able to assert sea control to some degree or another in order to conduct a defined mission or task.

In its latest strategy the USN states that it has won sea control and can now concentrate on power projection. A more accurate statement might be that since the USN already possesses the forces to allow it to operate relatively unhindered anywhere in the world it must now concentrate on acquiring equipment for the new mission of projecting power ashore. Since power projection is pivotal to US strategy it can be assumed that the USN feels that its most important job is to acquire the means of conducting it. However, in determining how it will fulfil the role it must still consider the means by which it will assert the degree of sea control necessary for it to be successful. Similarly, by applying the principles of sea control the USN should be able to decide what forces offer the best chance of success and, given the resources available will be able to alter its force structure accordingly. Therefore, despite the fact that the USN does not enunciate the need to seek or assert sea control in its latest strategy it assumes that it has the wherewithal to do so. It is then free to analyse how it will achieve the tasks that are derived from broader US strategy. This does not diminish the importance of sea control but rather focuses on the benefits that can be had through achieving it. In strategic terms it is far more important to demonstrate the means to conduct missions to complete tasks than the ability to conduct the business of naval warfare. An ability that strategic planners take for granted given the resources they expend in acquiring naval forces in the first place.

The same principles apply to small and medium navies. It may be necessary for these navies to exercise a degree of control over strategically important sea surrounding their own territory, however, this should not be mistaken for a strategy in its own right. Instead it should be expressed in a series of strategically vital tasks which result in sea control being achieved in the area in question. Although sea control might be the measure of effectiveness the mission itself is not to "seek and assert sea control". This is an important distinction. In applying the methodology of setting the mission and then analysing the way in which sea power can be utilised the small or medium navy can build plans and forces. On the other hand by just stating the need to seek and assert sea control it may end up knowing how best to apply sea power to the job but not knowing what forces and plans are required to actually do it. The distinction is fine but the consequences are enormous; sea control is a means to an end rather than the end itself.

The RAN provides an excellent example to illustrate the relationship between strategy and sea control in a medium navy. Australian strategic thinking places a great deal of importance on securing the freedom to operate in the Sea Air gap to the country's North and in the major shipping lanes around the entire continent. This is documented in a series of Strategic Concepts papers from which the RAN is presented with a number of specific tasks. These, like any other naval tasks, require the capability to conduct sea control. However, while it is possible to concede that the RAN seeks and asserts sea control in support of national strategy it is not possible to find the mission of the RAN stated in these terms. Instead, the RAN finds that its tasks are expressed in terms describing the capability for conducting maritime patrol and response, protection of shipping and air defence in strategically important areas.

Therefore, it is valid to assume that the possession of a navy guarantees the owner the right to assert a degree sea control. However, without articulating a clear strategy it does not guarantee that sea control

can be established effectively so that the inherent maritime power can be directed towards success. Any navy can seek and assert sea control but there is little point in doing so unless to do so supports a nationally endorsed strategy.

Conclusion

This essay has discussed the nature of sea control as a relatively recent concept that describes the ways that navies apply sea power. Defined as the ability to be able to operate naval forces freely to achieve missions or tasks, sea control is achieved by either sea use or sea denial. Unlike older concepts, sea control can be limited by time, space and existing factors such as force structure so that well-defined tasks can be achieved. Therefore, to some degree all naval forces have the capacity to assert a level of sea control.

Contemporary maritime strategies are practical in nature and are written for the purpose of demonstrating how sea power can best be used to support a national strategy. Similarly, they can also be used as the basis for constructing arguments about force structure problems and also for developing detailed operational plans. The role of sea control in this instance is as a measure of effectiveness in judging one plan against another. Therefore, sea control can be thought of as an important strategic concept but not as a strategy in itself

Finally, despite the fact that sea control plays such a vital part in strategic thinking it is not valid for navies to state that the need to seek and assert it is a valid mission for them. All navies seek and assert sea control by one means or another in routinely conducting their business, however, that is not a sufficiently descriptive mission to justify the expenditure of resources to acquire a navy. Instead there is a need to analyse the benefits of sea power against all other alternatives and then express the advantages in terms that describe HOW naval forces can achieve strategic aims. Therefore, while navies of all sizes will continue to seek and assert sea control they should do so within the framework of a clearly articulated strategy.

In conclusion, the USN is quite justified in making its assertion that it has achieved sea control and now must concentrate on its new mission of power projection. The same can be said for any other navy that wishes to make a similar statement, although most would be unwise to define the scale to which the USN aspires. Since sea control is not a strategy in its own right but is a concept used for measuring the effectiveness of maritime forces in executing strategic plans it is irrelevant whether or not a navy must seek and assert it. Should a navy have concerns about whether or not it can establish the degree of sea control it requires to complete its strategic mission then clearly, it has not conducted sufficient analysis for its maritime strategy to be effective in the first instance. Instead of seeking and asserting sea control navies must concentrate on developing the wherewithal for its effective application while remaining aware that their aspirations are likely to be challenged.

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Book Review

Taken by Storm The true story of HMAS Manoora's experiences in the South West Pacific theatre of war By Mervyn Eather- and Bill Galmes

Reviewed by Lieurenant Greg Swinden, RAN

Several years ago I wrote that ship histories had a tendency to be either well done or poorly done and there was very little middle ground. This is an example of a well written and interesting ship history.

Mervyn Eather and Bill Galmes both served in HMAS *Manoora*. Mervyn was an RANR Signalman and Bill an AIF Sapper (part of the ships Dock Operating Company). Together they have produced a highly readable and interesting history of *Manoora*'s time as a Landing Ship Infantry (LSI) in the Pacific Theatre. The .story of the ship is uniquely told by a central fictional figure, one Ordinary Seaman 'Shorty' Blake, whereas all other characters mentioned were actual members of the ships company.

The ships history starts with 'Shorty' Blake joining *Manoora* and then follows their fortunes, and misfortunes, through eight amphibious landings from Tanahmerah Bay (Dutch New Guinea) in April 1944 to Balikpapan (Borneo) in July 1945. *Manoora*'s last three assault landings were in Borneo where she landed AIF troops at Tarakan Island in May. Labuan Island in June and Balikpapan in July. When not employed as an LSI she was used as a troopship conveying Australian and American reinforcements to Dutch New Guinea, the Philippines and Borneo.

This book is well ,set out, lavishly illustrated and contains a number of Appendices detailing those who served in *Manoora*, details of Assault landings, honours and awards, and other snippets of information about the ship and those who served in her. One Appendix describes in detail *Manoora*'s only casualty of the war, the unfortunate Sick Berth Attendant Alec Hill, who went for a joy ride in a RAAF Beaufighter involved in an attack on Japanese positions on Celebes (Netherlands East Indies) in February 1945. The Beaufighter was shot down and Hill became a Prisoner of War. He was executed by the Japanese in June 1945.

The book was printed by Port Phillip Press of Elsternwick, Victoria and they have done an excellent job and produced a very professional publication. 'Taken by Storm' is an A4 size paperback of 252 p ages available for $30 (includes postage) from the HMAS *Manoora* Association (c/o 21 Royalty Ave Highett VIC 3190 or J. Willson 1 46 Bay Road Sandringham VIC 3 1 9 1).

A recommended purchase for Naval historians and those with an interest in HMAS *Manoora*.

United States Naval Institute Sponsors War Of Words

The US Naval Institute invites entries for is prestigious Arleigh Burke Essay Contest, previously known as the General Prize Essay Contest, an annual competition now entering its 118th consecutive year.

Three essays will win prizes. Anyone may enter. First prize earns $3,000, a Gold Medal, and a Life Membership in the Naval Institute. First Honourable Mention wins $2,000 and a Silver Medal. Second Honourable Mention wins $1.000 and a Bronze Medal.

The topic of the essay must relate to the objective of the U.S. Naval Institute: "The advancement of professional, literary, and scientific knowledge in the naval and maritime services, and the advancement of the knowledge of sea power." The essay must analyse, argue, persuade, and/or interpret, not merely offer an exposition, a personal narrative, or a report. The Editorial Board of the U.S. Naval Institute will judge the essays. Essays must be original, must not exceed 3,500 words, and must not have been previously published An exact word count must appear on the title page.

Direct all entries to: Arleigh Burke Essay Contest, U.S. Naval Institute, 118 Maryland Avenue, Annapolis, MD 21402-5035. Essays must be postmarked on or before I December 1997.

Guidelines: The name of the author shall not appear on the essay. Each author shall assign a motto in addition to a title to the essay. This motto shall appear (a) on the title page of the essay, with the title, in lieu of the author's name, and (b) by itself on the outside of an accompanying sealed envelope containing the name, address, telephone, social security number, and short biography of the essayist, the title of the essay, and the motto. The Naval Institute will not open this envelope until the Editorial Board has made its selections.

The Naval Institute will present awards to the winning essayists at the 124th Annual Meeting of the membership of the Naval Institute in Annapolis, Maryland, in April 1998. It will notify the award winners during February 1998, and all other authors by March.

All essays must be typewritten, double-spaced, on paper approximately A4 sized. Submit two complete copies. If typed on a computer, please also submit an IBM-compatible disk and specify software used.

The Naval Institute will publish the three prize-winning essays in *Proceedings*, and may also publish some essays not awarded prizes. It will compensate these writers at the rate established for purchase of articles.

This paper was first presented to the Fast '97 Conference in Sydney and was published in the papers of that conference. it is reproduced here in slightly abridged format. It is republished with the permission of the ADI Ltd.

Military Fast Vessels for Australia

Dr Ross Babbage, Tony Armstrong, Ray Toman and Joe Blansjaar

Introduction

High Speed Craft (HSC) have long been of interest to major navies, but they have found only limited acceptance in specialised applications. The primary thrust of this article is to suggest that for some roles, at least, this situation is likely to change. Growing numbers of fat ships for dedicated commercial routes are the catalyst ensuring that this technology will find a military application. During the next twenty years we are likely to witness an accelerating shift from conventional displacement naval ships to very fast and very stealthy vessels. Radical changes in hull forms and topside geometry, and the acceptance of non-traditional materials and new naval building standards by contribute to a surface warship revolution. There is potential for Australia to be a leader in this field, given its share of the world fast ferry market, and thereby avoid the dangers of rapid technological obsolescence.

Key Stimulants for Change

There are many factors driving the shift to fast naval craft. Three of the most important, that would seem to have particular relevance to the Royal Australian Navy (RAN) are discussed briefly below.

First, changes in the nature of maritime warfare are making slow, non-stealthy surface platforms far more vulnerable. This is partly a consequence of greatly improved long range sonar systems and other electronic systems which are making large surface vessels increasingly easy to detect and track.

When these wide-area sensor systems are combined with advanced digital communication systems it is possible to fuse the sensor-data in close-to-realtime and thus provide a coherent picture of surface ship movements across whole regions. Naval commanders are, hence, starting to acquire a remarkably transparent picture of their theatre, and may command friendly forces with much higher confident and, if appropriate, launch highly coordinated precision strikes on opposing forces.

Second, is the particular suitability of fast ships for operations in Australia's very expansive maritime surrounds. High speed can compensate in large part for the tyranny of distance offshore. Speed can provide unprecedented area coverage and, when vectored by externally supplied information, unprecedented capacity for timely arrival at critical locates. High speed hence delivers great efficiency and effectiveness, frequently offering higher level capability options with fewer hulls.

A third factor encouraging early consideration of fast naval craft, is that a small but rising proportion of regional and broader international shipping is now travelling routinely in the 35-45 knot speed bracket. Within fifteen years, operations by very fast container ships carrying premium cargoes are likely to be frequent along the Western Pacific rim. In this timeframe naval constabulary duties, enforcing maritime and other regulations, are likely to be exceedingly difficult for naval units that cannot at least match the speed of commercial vessels. It is doubtful that navies will permit commercial vessels to leapfrog the performance of their key surface platforms for long.

Why are Commercial High Speed Craft Succeeding?

To help answer the question as to whether there is an application for fast vessel technology in the naval arena, it is worth looking at the reasons why commercial high-speed craft have become operationally successful in the past few years, and what aspects have changed to make them successful.

The initial success of these craft led to a substantial amount of research and development, which in turn led to great improvements in operational efficiency, vessel performance and safety levels. Significantly, the proliferation of varying concepts of hull forms, predominantly seeking to increase speed well beyond their displacement-bound counterparts, have also attempted to address passenger comfort and sea-keeping.

Much of the initial success of the commercial high speed vessels seen today is attributable directly to a brave commercial decision to order the first of the current generation of high-speed car ferries. Sea Containers already operated car-carrying hovercraft on the English Channel route, but these craft were somewhat unreliable and had high maintenance costs. They were complex in their structure and system

design, necessitated by the need to save weight. The high-speed catamaran offered the characteristics of a very simple vessel, and the resultant operational cost savings deriving from this simplicity.

This initial phase was also made possible by a number of technical developments:

- Propulsion engines become available having a high power-to-weight ratio, and having a power output at engine speeds suitable for driving waterjets. These engines were offered specifically as suitable for ferry operations, with their constant stop/start load cycles, and having a power output at engine speeds suitable for driving waterjets. These engines were offered specifically as suitable for ferry operations, with their constant stop/start load cycles, and having a reasonable fuel consumption (about 199 gms/kw-hr).
- There was an acceptable international set of rules covering the safety aspects of the craft – the Dynamically Supported Craft Code, although this required some extrapolation because of the size of the craft.

Once the first vessels entered operation, the International Maritime (IMO) recognised the need for a new set of safety rules. This resulted in the publication of the High Speed Craft Code of January 1996. This document has allowed the development of current designs of high speed craft. The philosophy embodied in this Code is one of providing an equivalent safety standard to that of SOLAS, which is the accepted standard for commercial craft, and yet this has been done without placing too many restrictions of the novel aspects of the ship design, and has allowed virtually unrestricted development.

These first vessels could be considered as prototypes. Wheat was learned on these craft has led to a substantial increase in knowledge of how high-speed craft behave in a seaway, and how their operational aspects could be improved so that running costs could be reduced. Other operators took notice, and the craft eventually lost their curiosity status and were recognised in their own right.

The last three years of operation and research have been important ones. The main thrusts have been to save weight, minimise operational and building cost, and improve the comfort of passengers. Some of the major outcomes from this period are considered below.

Weight Saving

The substantial use of finite element analysis (FEA) techniques has now become standard in fast ship structural design. Furthermore, this is now being used as a tool to optimise the structure an d ensure that all structural items, including the smallest bracket, are designed with minimum scantlings and structural efficiency in mind.

The use of FEA is important, but the accuracy achieved is dependent upon the loads that are applied. Previously, these loads had not been very well understood, and this resulted in a conservative approach in estimating their magnitude. Recently there have been numerical techniques developed and proven against model tests and full-sized vessels. These full-sized vessels, which are amongst the largest and fastest of the high-speed craft, have b een extensively instrumented and monitored such that the incoming wave heights and resultant acceleration and stresses in the major structure are recorded. This better understanding of the loads resulting from operation in a seaway is leading to more accurate prediction and more efficient structural design.

Other weight savings have been achieved via:

- Competition from alternative designs, leading to a concentration on simplicity and cost reduction.
- A better understanding of the behaviour of marine grade aluminium under cyclic loading, leading to structural design methods to minimise crack propagation and fatigue failures.
- The availability of different materials which continue to be developed. New aluminium alloys are available having higher strength properties. Composite materials with good fire protection properties are also becoming a reality.
- Continued development by the engine manufacturers to provide engines with higher output power and lighter weight, while remaining reliable.

Operational and Building Cost Reduction

Minimised manning on-board has been achieved in the areas of operational requirements and safety. The engine rooms are usually unmanned, with all maintenance being carried out ashore, and with extensive use of monitoring equipment on-board. The development of electronic navigational equipment has made the work of the crew easier and certainly improved the efficiency in the wheelhouse. Development of Marine Escape Systems and the use of videos for safety demonstrations has led to reduced manning levels, although the successful inclusion of duty free shops on-board many vessels has kept staffing levels reasonably high.

In general, high speed craft are designed to rely on support from the store, and the integration of total quality management has been an essential part of the success of these craft.

A major cost of operation is that associated with the propulsion machinery. The specific fuel consumption levels have reduced, but have not altered very much over the past five years.

Building costs are being reduced through the introduction of mechanisation in the building process, better joining and welding methods, reductions in the amount of structural material in the vessel, the workability of the material itself, and by clever design.

Comfort and Hydrodynamic Behaviour

Many passengers found the early fast ferries uncomfortable in a seaway. A substantial effort has been made to understand the hydrodynamic behaviour of high-speed hull shapes, and this has led to the development of hull shapes that give a minimum response to the sea-state. Active ride control systems have also been refined so that they are capable of reducing accelerations by more than 50% and they are also able to effectively de-couple the various motions that lead to the early onset of motion sickness. Similarly, the manoeuvrability and course-keeping ability of these craft has been improved through an understanding of the hydrodynamic forces.

Safety

The record of high-speed craft on fire safety is very impressive, brought about by a strict interpretation of the regulations in the use of structural fire protection, and by the use of fire detection and monitoring equipment. High-speed passenger craft are inherently safe owing to the general lack of (small) unmanned spaces where fires may develop undetected, and by the lack of flammable material. It is believed that the conservative approach taken to date may be overtaken by a more knowledge approach in the next few years, resulting in reduced weight and building costs.

Evacuation equipment and procedures have been developed and demonstrated that result in rapid evacuation of craft (up to 1300 persons within ten minutes).

Catamarans with multiple void spaces in the in the hulls have shown their capability to withstand a very large amount of damage and still remain afloat.

Progress in weight saving, reducing operational and building costs, comfort and safety as outlined above has resulted in a considerably better understanding of the behaviour and the limitations of high-speed craft, and an understanding of an efficient way to design such craft, so that they are the most efficient way for an operator to provide a passenger ferry service. This understanding is available to be applied directly to the design of other types of craft to meet a range of requirements.

Commercial high speed craft are succeeding in high volume transportation situations where the transport economics favour this type of travel and the prevailing weather favours high-speed multi-hull craft. The principal lesson to be learnt is that simplicity has lead to the operational efficiency and economic advantage over conventional craft. This same thinking should have some relevance to naval craft.

Implications for Naval Vessels

Modified operating principles and construction standards for naval HSC

Changes in philosophy and well-proven procedures will be required if ships springing from commercial HSC experience are to be designed and accepted for naval service. Naval acceptance of HSC would require very significant changes to current military standards and specifications which evolved from the requirements and experience of conventional (mostly steel) vessels. The development of light-weight, high performance systems relied upon new light-weight materials which have more in common with the aircraft industry.

Similarly, many of the operations and maintenance practices for HSCs are likely to relate more to those in the aviation industry. Sorties, rather than deployments, may better describe their operations. Minimum manned HSCs might not have a permanent crew assigned and could be made highly reconfigurable for specific tasks. the need for crew to live for extended periods onboard, with implied provision of hotel services, medical, catering and recreational facilities, could also be reviewed and might lead to further significant economies.

In a recent presentation, K.M. Wiklund DNV[1] made the observation that the safety level of conventional shipping has been developed on the basis of a continuous evolution and some major accidents at sea. The new HSC Code is a stand alone safety standard

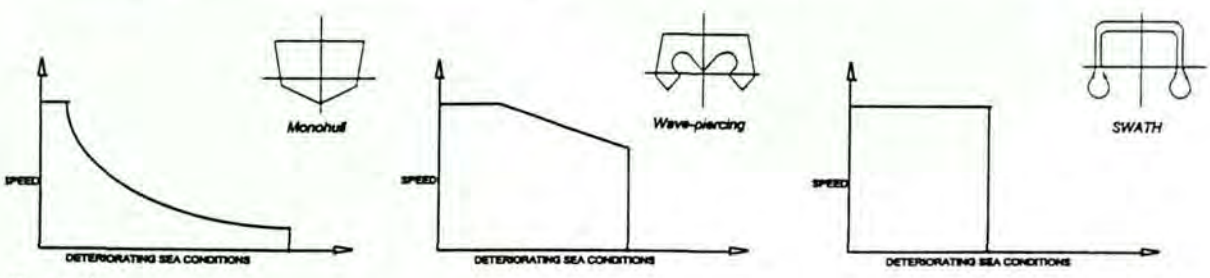

Figure 1

which focuses on the most important aspects for high speed craft and sets a new safety level for sea transportation. Wiklund's observation can be extended to naval ship development which has also been based on continuous evolution of the monohull.

Seakeeping

Whilst there are many possible configurations for high speed craft, at Fig. 1 below is illustrated the broad speed versus sea state characteristics of the current generation of large, successful, commercial craft.

Much has been done to improve the sea-keeping performance of high speed craft. As commercial operators have been competed with the other forms of travel, engineering efforts have been focussed on satisfying the need for higher standards of stability, safety and comfort. Active control systems at high speed now provide stability which is difficult to match in conventional craft. This improved stability at speed has enhanced the potential of sensor and weapon system performance.

Significantly, close examination of present fast car/passenger ferry activity show that these travel on specific established routes, many of which operate in tandem with conventional Ro-Ro passenger shipping. In periods of severe weather high speed ferry operations cease, and their business is surrendered to conventional ships. This is obviously an issue for naval operations.

Whilst inability to operate in all sea states is also a commercial problem, this has not prevented substantial investment in HSCs. For example, three fast ferries are operating European routes at services speeds in excess of 40 knots:

- HSS1500. A 124m semi-SWATH, service speed 40 knots in up to 5 metre waves, no active ride control but fitted with passive fins aft. This design has been optimised for seakeeping. The size of the craft greatly assists in achieving good seakeeping and nose diving is avoided in following seas by limiting speed to the speed of the waves.
- SEAJET-250. A 76m semi-SWATH with 43 knots service speed. No active ride control is fitted though it is recommended if such vessels are to be used in seas of greater than 2.5 metres significant wave height.
- AQUASTRADA is a 102 m hard chine monohull with 43 knots service speed and active ride control systems which control pitch and vertical accelerations. It was principally designed for operations in the Mediterranean.

Course keeping in following seas needs to be studied. Experience with fast ferries equipped with water jets and no rudders has shown that the absence of any anti-drift surface astern can generate a yaw instability in following seas which could be dangerous in heavy sea conditions.

Stability and safety at low speed is addressed by the commercial sector. However, whilst these craft are very manoeuvrable and stable they are not naturally suited for loitering or towing. Solutions to the loitering speed requirement may be:

- Small gas turbines or diesels, driving directly or as generators with retractable or hinged arm propellers.
- Small gas turbines or high speed diesels, engaging the main water jets for both loiter and cruise operations.

Naval patrols often involve long periods at low speeds. Yaw stability at loiter speeds in waves would need to be tested. Ballasting a multi-hull high speed craft would increase motion damping but also scantling requirements, whilst a SWATH would inherently have less motion at loiter speeds than a catamaran, this form carries the penalties of deeper draft and higher scantling requirements.

Ultimately, naval ships have specific warfighting capabilities. Notwithstanding that many of the platform attributes of HSCs have been demonstrated commercially, there is very limited experience in the operation of such vessels with helicopters, military sensors and weapons.

Sea-States and Wave Heights around Australia

In fast ship technology, hull form dynamics has a considerable impact on sea-keeping, and some types are known to be more sea kindly than others. When the ship task requirements are defined, optimal vessel geometry may vary from region to region. Figures 2 and 3 show average sea spectra data during the summer and winter months around the Australian continent. There are obvious operations overlaps between the regions and no single hull form would be ideal for all.

The naval requirement for extended periods on station is met by low speed loiter, medium speed cruise and a maximum speed sprint profile with a common economical cruise range of around 15 knots. In contrast, most fast ferries have a high continuous service speed, low manoeuvring speed profile. Significantly the HSS1500 has three point operating speeds (25,32 and 40 knots) taking advantage of the split 2 x LM2500 gas turbine and 2 x LM1600 gas turbine main propulsions units. A naval design to operate at service speeds above 40 knots and adapted from a commercial design might incorporate a faster transit speed of around 25 knots to utilise the available hull and propulsion efficiency. The naval variant could be equipped with split main propulsion units of four gas turbines driving four steerable waterjets, plus loiter propulsion. Presumably

both the payload requirements for weapons and helicopter, and lightship weight (less fitout) for a fast patrol craft would be less than for commercial car passenger craft. There should thus be ample scope for extra fuel within the design displacement.

Average Mean Wave Heights (metres)
Summer Period

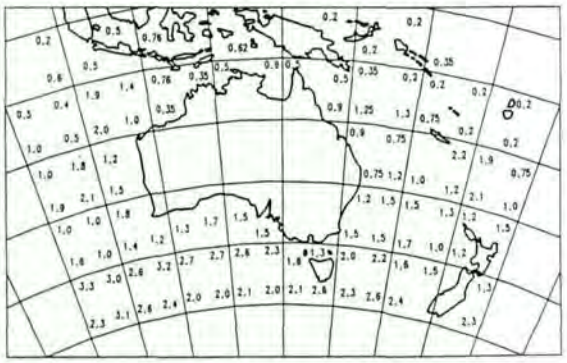

Figure 2 – Calculated from reference: Marine Information Manual Australia, 2nd Edition, Dept. of Transport Australia, AGPS, Canberra 1976.

Average Mean Wave Heights (metres)
Winter Period

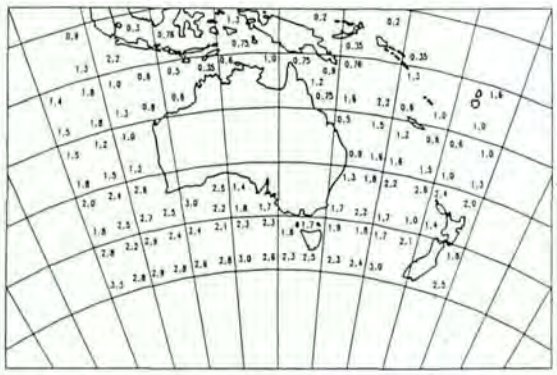

Figure 3 – Calculated from reference: Marine Information Manual Australia, 2nd Edition, Dept. of Transport Australia, AGPS, Canberra 1976.

Helo operations

Helicopter operations present a number of challenges. The high transverse stability of all multi-hulls result in short roll periods. At forward speed these periods become even shorter, however roll angles are also small. By comparison, the monohull roll period and roll angles are considerably higher. At low speed, the use of active ride control systems in a monohull to reduce roll angle would probably prove ineffective. Noteworthy also is that measurement of vehicle lashing loads on the HSS1500 were recorded at 0.65 tonnes[2] in each securing tie, suggesting the absence of high lateral accelerations.

Motion problems in fast catamarans have been associated more with pitch motion rather than their roll period.

At speed an HSC is able to provide a very stable platform which to operate a helicopter. However, at this speed the cross-deck wind and the lateral accelerations of the deck may be higher than those experienced in monohulls and would need to be studied. An HSC would most likely select a flying course to limit deck movement which may not be compatible with ideal wind conditions. Helo handling, hangering and fuelling arrangements could involve a weight penalty of approximately 25 tonnes or the equivalent to 20 passenger cars. In smaller HSCs may also be able to support adequate helo operations without the weight and space penalties of frigate-type helicopter support facilities.

Sensor and Weapon Performance

This is an area for significant study, especially if smaller HSC are contemplated. High speed, whilst assisting a very stable platform, requires tracking and weapons systems to accommodate high target bearing crossing and range rates similar to those experienced in anti-air warfare. This, and the need for simplicity, might lead to a preference for autonomous weapons coupled with laser range-finders and designators. Further, should stealth-enhancing design significantly reduce the radar signature of the craft, at least some surface engagements may occur at horizon (line-of-sight) range. Electronic support measures and third party surveillance and reporting would likely emerge as a very significant warfighting factor.

Stealth adaptability

Signature suppression is a complex issue. There are certain aspects of high speed commercial craft that have positive suppression attributes. The use of waterjets would contribute to a lower acoustic signature and locating the noisy equipment above the waterline would also assist. Alloy hulls would lower the magnetic signature and the combination of a non-magnetic hull and no rotating propeller shafts it eh water minimises the underwater electric potential. Low pressure signatures would result from lightweight hull structures and fine hull forms.

It appears that there may be some convergence of good fluid dynamics and stealth characteristics. At the Euronaval exhibition held at LeBourget, France in October 1996 Vosper Thorneycroft exhibited the Sea Wraith 2500 tonne corvette design. Both hydrodynamic and stealth research has led to a forward sloping stealthy wave-piercing bow form. According to Vosper Thorneycroft conventional bows contribute greatly to the radar and IR signature of ships. Notably the first sighting of this bow form was on the Kvaerner-Masa Euroexpress 40 knot 4000

tonne deadweight commercial design with wave-piercing 'whale-back' bow. Whilst there is a view that multi-hulls may cause some signature problems, it may be that the aerodynamic research that led to the unconventional bow profiles of both the HSS1500 and SEAJET250 cold also have some stealth advantages.

A very significant contribution to stealth enhancing the hull and superstructures has been done by the Swedish Navy in the SMUGE-YS 2000 project. Seakeeping, radar cross-section and IR and magnetic signature were all studied in a very sophisticated proto-type programme which is now contributing to the YS 2000 programme[3]. This work could make a valuable contribution to an Australian study.

Damage control and build material

Damage control and the control of fire are two of the more significant design issues for both commercial and military operators. In the commercial sector the emphasis is on the safety of the passengers and crew. Commercial high speed vessels have an ability to save the vessel.

Aluminium, while non-magnetic, has minimal shock absorption qualities and is not a good thermal insulator. The High Speed Craft Code restricts the use of certain structural materials due to fire safety requirements. The RAN is not restricted in this way and this may provide the basis for useful civil-naval co-operation. The RAN could possibly develop a composite version of a fast craft which had previously been engineered in alloy and, when the High Speed Craft Code permits composite structures, the re-engineered craft could pass into production for commercial use. The Norwegian and Swedish navies are presently constructing FRP composite multi-role craft. The Norwegians have chosen a surface effect ship design for their fast patrol boats of the 'Skjold' Class. The Swedish navy whilst reverting to a more traditional monohull for the YS 2000 is incorporating many advanced design features, including composite construction with carbon fibre laminate.

Conclusion

As is well known, Australia has played a leading role in the design, development and construction of the new class of high speed craft, operating in increasing numbers around the world. Australian high speed catamaran designs are succeeding commercially in high volume transportation situations where transport economics and weather patterns are favourable. Continuous attention to weight saving, manning reductions, ride quality, simplicity in design and efficient manufacture, have underpinned this success in the commercial market.

As yet, Australia's success in commercial high speed craft seems to have had little impact in the naval arena. Yet, in this market, key stimulants for change are also at speed and stealth for naval vessels. Finding more efficient ways to provide surveillance and timely response throughout Australia's large EEZ, but particularly to the north, will always be important, and it seems obvious that vessels employed in policing duties will need to be able to keep up with the traffic which, increasingly, will include high speed commercial craft.

In considering possible naval applications for Australia's high sped craft technology, it is important to remember that the current size, sophistication and reliability of commercial craft in this class, did not come about instantaneously. Rather, there was a process of evolution over time from relatively small simple craft, and that process is still continuing. Similarly, development and experimentation will be necessary to establish whether vessels of this class do have any long term naval application. Australia is well placed to undertake such experimentation and in view of its geographic and strategic circumstances there would seem to be a case for undertaking such a development programme. This might explore through practical experience, the implications and changes in naval operational philosophy that would be necessary if it were decided to utilise lightweight, high speed craft, similar in concept to the current generation of Australian very fast vessels.

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The RANVR and the Normandy landings

John Connor, School of History, ADFA

As the British historian Richard Overy commented in 1995: 'For all the attention lavished by historians on the land battle in Normandy, Overlord was a classic example of Admiral Mahan's famous dictum that the sea rules the land.'[1] The success of OVERLORD relied on the success of the separate naval operation, NEPTUNE, to land the Allied armies and then provide continued support. An important aspect of the naval operation was the extensive use of landing craft, both to land troops and vehicles and to provide fire support in the pre-landing bombardment, and manning these landing craft was one of the many important tasks carried out by members of the Royal Australian Naval Volunteer (RANVR). The aim of this article is to discuss the role of RANVR personnel on landing craft during NEPTUNE.

An estimated one hundred RAN and four hundred RANVR personnel took part in the Normandy landings.[2] Frank Appleton was one of these men. Born in London in 1906, Appleton immigrated to Australia in 1923 and learnt to sail on Sydney Harbour. He joined the RANVR as a Sub-Lieutenant under the Yachtsmen's Scheme in 1941. These scheme allowed men with sailing experience, or in the words of the regulations, with 'the habit of the sea'[3] to join the RANVR by going before a Naval Selection Board, where they were examined for proficiency in navigation, seamanship, signals and First Aid. Successful recruits under thirty years of age joined the RANVR as ratings, while those aged between thirty and forty entered as Sub-Lieutenants.[4] Appleton was sent to the UK, where, with thousands of other volunteer reservists from Australia, Great Britain, New Zealand, South Africa, Canada and Newfoundland, he was attached to the RN. After a short time on a North Sea trawler on anti-submarine patrols, he was posted to Combined Operations in 1942.[5]

Combined Operations Headquarters had been formed in mid-1940 to plan attacks on German-occupied Europe. To fulfil this aim required the development of new tactics and new equipment, especially landing craft that would enable men and vehicles to be safely landed on enemy beaches. Many problems had to considered and solved before the Allies could return to Europe. One difficulty was how to give fire support to troops as they landed. The solution decided upon was to land tanks in landing craft on the beaches with the troops. These landing craft were logically called Landing Craft Tanks (LCT). Combined Operations had the first prototype of the LCT built before the end of 1940.[6]

On joining Combined Operations in 1942, Appleton was posted to a LCT, and on 19 August, he took part in the disastrous raid on Dieppe.

One of the many lessons of Dieppe was that, in order for a landing to be successful, every part of the beach must be drenched with fire just before the troops came ashore. This was necessary to destroy German beach defences, such as mines and barbed wire entanglements, and to suppress German artillery and machine guns. The solution to this problem was found in creating modified armed versions of the British-designed LCT and smaller Landing Craft Assault (LCA), which were both now being built in their thousands in the United States. The LCT(R) carried 1100 5-inch rocket projectors, while the LCA(HR) or HEDGEROW carried twenty-four 60-pound mortars. Both were designed to be fired at the beach just before landing to clear the beach of obstacles and suppress enemy fire. While the LCT(R) was generally recognised as a useful invention, the HEDGEROW was not entirely successful, because, unless the landing craft was solidly run aground on the beach before firing, the mortars had the habit of blowing holes in the hull floor.[7]

In 1943 Appleton took command of 31st LCT Flotilla, which consisted entirely of Australian, New Zealand and British Reservists and Volunteer Reservists, and started his crews in the regimen of constant training that would be required for a successful landing. For this training work, Appleton would be awarded the Distinguished Service Cross.[8] As was written at the time: 'Command of a flotilla of tank landing craft is a position of far greater responsibility and importance than is generally realized. Senior R.N. officers closely connected with Combined Operations duties have expressed the opinion that the responsibility resting on the shoulders of flotilla officers is, in some respects, more difficult than that of captains (D)'.[9]

The 31st LCT Flotilla was equipped with twelve LCT Mark IVs. The Mark IV was the definitive version of the LCT, 731 of the type being constructed between September 1942 and August 1945. The Mark IV had a crew of 12, was 187 feet 3 inches long, had a beam of 38 feet 9 inches, was powered by a 460 horsepower Paxman engine and could carry 350 tons or four tanks.[10] However, in order to land effectively on beaches, the Mark IV also had a very shallow draught. Commenting after the war, Captain RC Todhunter RN, who had served in Combined Operations, remembered that 'many experienced naval officers' thought, when the LCT Mark IV design was first proposed, that the shallow draught would make the

craft 'completely unmanageable'.[11] Even the landing craft designer, Mr R Baker, admitted that the LCT Mark IV was 'flimsy' because 'the draught and depth were very small in relation to the length and the beam was very great'.[12]

As is well known, the Allies subjected the Germans to an extensive deception campaign to cloak the time and place of the invasion, and as is also well known, this deception worked. As late at 4 June 1944, the German Commander in Chief in the West, Field Marshal von Rundstedt stated: 'As yet there is no immediate prospect of the invasion.'[13]

Even as von Rundstedt was making this comment, Appleton's flotilla was being loaded at Southampton with Self-Propelled Guns – 105 mm howitzers placed on tank chassis – of the 12th and 13th Field Regiments, Royal Canadian Artillery.

As soon as they left harbour, the Canadian gunners felt seasick and they took the seasick pills with which they had been issued. This was a pity because, as we know, the invasion was then postponed for twenty-four hours from the fifth to the sixth of June, so the effect of the pills had well and truly worn off before the LCTs, flat-bottomed and susceptible to every wave, hit the open sea the next day.[14] The 31st LCT Flotilla sailed through mine-swept channels escorted by torpedo boats to the mid-channel rendezvous that became nicknamed 'Piccadilly Circus'.

Members of the RAN and RANVR were scattered through the rest of the vast fleet assembled for NEPTUNE. They served on minesweepers, like Ronald Hawke; on torpedo boats (MTBs) like Leslie Yock; on the battleship HMS Rodney, like Tony Robinson; and, like KR Hudspeth, on the midget submarine X-20 , which guided the assault forces to the correct landing areas[15]

Appleton's flotilla was to land in the Canadian landing area, code-named JUNO, on NAN Beach. The pre-landing bombardment was to be carried out by warships, like HEDGEROWs and rocket-armed LCT(R)s, but only one out of the nine HEDGEROW landing craft reached the landing area. The fighter aircraft, which had been providing a protective escort over the ships, had been ordered to increase their altitude to ensure they would not be hit by the bombardment, but one American pilot, who unfortunately let curiosity get the better of him, stayed low, and was caught in the explosive storm when the LCT(R)s fired their rockets. The Self-Propelled Guns aboard the LCTs also added their fire to the bombardment. Investigation later found that little damage was done and that 'the effect of the drenching fire was moral rather than material',[16] but even if the German emplacements had not been destroyed, the defenders inside were so shocked by the force of the bombardment that they were incapable of reacting when the first amphibious tanks came ashore, followed by infantrymen of the Royal Winnipeg Rifles and the Regina Rifle Regiment. The landings at JUNO had been delayed by about ten minutes, and the tide had began to rise when the LCTs began their run in to the beach, about twenty minutes after the tanks and the infantry. Instead of beaching in front of the shore obstructions, the rising tide pushed the LCTs amongst them. Only three out of the twelve LCTs of Appleton's flotilla were able to get off the beach again under their own power. The Canadian beach suffered the second highest number of casualties, after the American OMAHA landing, but by the end of the day, the Canadians had also made the furthest advance inland. The sixth of June was not the end but merely the beginning of the LCTs' job to supply the beachhead. Appleton began a continuous shuttle between England and the invasion beaches that would last for two months.[17]

Forty-five HEDGEROW landing craft, each with a crew of four, were used for the British landings at GOLD and SWORD.[18] One of these craft was commanded by another member of the RANVR from Sydney, Sub-Lieutenant Bruce Ashton. His flotilla was towed across the channel behind LCTs. Two HEDGEROWs were lost on the trip across the channel and four men drowned. At dawn they arrived in the GOLD Area just off KING Beach. On this beach forty swimming tanks were used ahead of the landing by troops of the 5th Battalion, East Yorkshire Regiment, and amazingly, thirty-two tanks reached the beach, after a 7000 metre journey through heavy seas.[19] At the allotted time, the HEDGEROWs went ahead of the other landing craft and ran in towards the beach before firing their mortars. This account of what happened on the beach was written by the commander of Ashton's flotilla, Lieutenant Commander HM IrwinRNVR:[20]

> *The beach appeared ahead. The sky was cloudy and the sea rough. Our bombardment was coming down from the hinterland to the beach. Ashton was rammed. I closed the steel hatch and then, when a few yards from the beach, I worked the ripple switch. Our bombs went off with a terrific bang ahead. Two bombs remained in the craft. Hard aport and the LCT beached. The first tank moved out. Amazing, unbelievable, not a shot fired! All was quiet for a moment or two – nobody on the beach but one tank. An explosion as the waterproofing was disposed of. Her flails started. Then black smoke came from the tank as she was hit and it caught fire. This was H-1 minute...*
>
> *The East Yorks landed and rushed up the beach. We were 150 yards away and saw it all. One man wounded. Just like a rabbit, up, down, up and crawled to the sea wall. The Germans on top of the sea wall were chucking hand grenades over the wall to the soldiers (ours) below.*

Firefighters training on an old Wessex helicopter.

The tide came up. We could do no more. We turned seawards. It took us about three hours to cover a distance of approximately four to five miles, to be lifted on to a specific large LSI (Landing Ship Infantry).

In the first twenty-four hours of OVERLORD, 130 000 men were landed by sea, 23 000 landed by air and secure lodgement had been made on Hitler's Europe. However this success did not come without a price, in the first twenty-four hours, 11 000 Allied men were killed, injured or missing, and 291 landing craft of all types were lost.[21] In Bruce Ashton's HEDGEROW, was rammed in the confusion of the landing, only one of the four-man crew survived. Ashton and two of the crew were killed and were buried in Bayeaux.[22]

The success of the Normandy landings rested in the hands of RANVR and other volunteer reservists manning the landing craft. Their achievement in transporting and supporting the invading armies was immense. They worked with LCTs whose dimensions made them hard to operate, both in the gale-struck waters of the Channel, and in rising tides and obstructions of the crowded landing beaches, and yet, despite these difficulties, they succeeded. As Admiral Sir Philip Vian, wrote of the landing craft crews in the assault: 'Their spirit and seamanship alike rose to meet the greatness of the hour.'[23]

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16 CP Stacey, *The Victory Campaign: The Operations in North-West Europe 1944-1945.* Volume III of *The Official History of the Canadian Army in the Second World War,* (The Queen's Printer & Controller of Stationery, Ottawa, 1960) 100.

17 Interview Frank Appelton with the author, 1 June 1994.

18 LF Ellis, *Victory in the West Volume I: The Battle of Normandy.* History of the Second World War United Kingdom Military Series, (HMSO, London, 1962) 506.

19 Ladd, *Assault from the Sea,* 128.

20 Philip Warner, *The D Day Landings,* (William Kimber, London, 1980) 115.

21 Kenneth Edwards, *Operation Neptune,* (Collins, London, 1946) 23, 151.

22 AWM146 Roll of Honour Card for BV Ashton.

23 Admiral Sir Philip Vian, 'Report by Naval Commander Eastern Task Force', quoted in Stacey, *The Victory Campaign,* 101.

HMAS Brisbane
(Navy Photographic Unit)

Life and Times in the Lower Deck in the RAN in the 1930's

Captain W.F. Cook, RAN (Rtd.)

One of your members has shown me the article by Kathryn Spurling in the Jan/March 1997 *JANI*. I read it with great interest. It was not as I found the RAN at that time. My credentials for saying this? I served *at sea* in the RAN from January,1934 to May 1950 except for two short periods, of approximately 10 months each, in shore appointments. As a midshipman, sub-lieutenant and lieutenant in the 30's, I can't profess to having been privy to the inner workings of 'head office' (the Australian Commonwealth Naval Board), but I did see what went on in *Australia* (22 months), *Yarra* (18 months), *Adelaide* (2 months) S.S. *Autocyclus* (six weeks) and *Perth* (11 months) to June 1940. Thereafter, for 10 years, I served in 7 small ships; as 1st Lieutenant in three and as Commanding Officer in four.

Generally speaking Kathryn Spurling is comparing the conditions of the 1930s with those of 1997. Naturally, the old conditions of 67 years ago compare most unfavourably. Similarly, if a writer in 1930 had written about the lower deck conditions 67 years before that date, i.e. 1863, she or he would also have presented a dismal picture of the earlier times. The questions are were the sailors' 1930 conditions abnormal for those times? Did they differ greatly, and to the disadvantage of the sailor, from those of the men in similar socioeconomic circumstances ashore? If so, did that cause unrest?

I spent all my midshipman's time in *Australia*, except for taking passage in an RN Cruiser from Alexandria to Plymouth in 1936. On the whole we midshipmen were closer to the sailors than were the more senior of our officers. We spent hours with our boat's crew - a leading Seaman, 2 ABs and a stoker- in all sorts of weather, at all hours of the day and night and in many different and strange harbours. There was time to yarn with them when the boat was kept waiting and they talked more freely with us. I think they accepted Mids as 'one of us' and not 'one of them'.

I cannot remember any serious grumbling - all sailors grumble, but as the wise old Admiral (RN) wrote in his Verses:

'The Laws of the Navy: ...

> *Do they growl - it is well be thou silent*
> *So that work goeth forward amain*
> *Tho' the gun throws her shot to a hairsbreath*
> *and shouteth - yet none shall complain.'*

The other sort of growling, when 'work be retarded' is a different matter. Traditionally, and happily, a great deal of sailors' and officers' growling is in the first category. I will comment briefly on a few of the Author's points.

The White Ensign

Yes, we did wear it, and with great pride. We were recognised not only by foreigners but also by the RN as on a par with our 'opposite numbers' in the latter. As a Navy, on our own, we were insignificant by world standards and could not muster a balanced force. As part of the Empire navy we had some standing; and showed our independence and our national colours by wearing the Australian flag at the jackstaff in harbour: a Commonwealth Navy Order dating from 1911. The old sailors' love of our original white ensign is exemplified by the numbers of them who ask that they be buried under it. As a child wears the family name, and proudly so, we wore the flag under which the RAN was born.

Admiral G.F. Hyde

The author is scathing in her criticism of this senior officer. She damns him with faint praise, 'his papers offered some pertinent points, but the emphasis etc. ...' How omniscient does one have to be in order to deduce from 'omissions' a person's lack of understanding, if not regard for, the men of the Australian Navy (presumably because his roots were firmly grounded in the Halls of Admiralty?).

I have come to conflicting conclusions based on the facts of his career. Hyde's roots were grounded in the merchant service. He did not achieve an early entry into the RN, and went to sea in a sailing ship a little older than the usual age. He received a commission in the Royal Naval Reserve and commenced periods of training as an RNR officer transferring to the RN in 1904. As a Lieutenant, he captained a River Class destroyer in a flotilla where all the commanding officers were either Commanders or Lieutenant Commanders. He was promoted to Acting Commander on June 1st 1911 and, later, transferred to the Australian Navy in the rank of Commander. His first appointment was to command the new Australian destroyer flotilla. He had a most impressive record at sea.

I have emphasised his long service in destroyers and his obvious success as a destroyer captain. Dull would he be of soul (and wit) who, after years of close contact with his sailors in a small ship, still lacked an understanding and regard for his men. On taking over as CNS in 1931 he gave this stern publicly expressed warning to the people of Australia about Britain's weak position amongst the world's naval powers: 'He who sings 'Britannia rules the waves' sings a lie.' This was boldly stated at a semi-official dinner at a prominent Melbourne Yacht Club and hardly the thing to do for an acolyte of the Admiralty.

Spurling goes on to say 'Major decisions on the make up of the fleet itself rested with the Admiralty rather than the Australian Government 'and that 'Australian Vessels were not normally deployed in Australian waters but where the Admiralty believed the interests of the Empire lay.' These statements do not accord with the sentiments of the Federal Parliament, or the British Admiralty, as expressed at the Imperial Defence Conference around 1909. There, Australia offered the options of a 'free Dread-nought to Britain or more expenditure on a local squadron.' The Admiralty accepted the latter and 'proposed an independent Australian Fleet consisting of vessels. This squadron to be manned by Australian officers and men and to be under the exclusive control of the Commonwealth Government.' Further information may be found in the '1901-1910 Parliamentary Debates on the Financing of Australia's First Navy' in the *Naval Historical Society Review*, No.2 1997.

Uniforms

'Uniforms for Australian Seamen were the same as their British counterparts....' What had this to do with unrest in the RAN? Were the 1930 sailors unhappy with their uniforms? See the author's remarks at page 46 '....the pride felt in being a member of the lower deck...tidily (sic) suit...etc..' Sailors in navies throughout the world followed the pattern of the British uniform. 'Today, and for many years past the prevailing colours of all marine uniforms is blue, and variations in cut and design are remarkably small as between the various seafaring nations both for officers and rating.' Was not the myth about the black silk and the white tapes on the collar born out of the tongue-in-cheek answer which sailors gave to enquiring landlubbers?

The Depression Years

Admiral Hyde gets the author's reluctant approbation by his suggestion that 'pay (in the Navy) was certainly an issue of great importance.' Surely the main gripe of the sailors was the '22% pay cut in the salaries of all Government employees' which was unfair but was a government decision not likely to be reversed or altered in those stringent times. Was it the Naval Board or the Government which was 'unsympathetic to the lower deck'? I believe this did cause minor unrest in the form of a protest on the wharf at Melbourne; but at least Australia was spared the damaging national disaster that the RN Invergordon mutiny did to Britain. The inequality between naval pay and that of public servants has been an ongoing source of complaint by both officers and men for many years and was not uniquely a 1930's problem. As to taxation, I was below the tax threshold as a lieutenant, so tax would not have been of concern to the sailors.

Small Shipboard Businesses

These were part of naval tradition since time immemorial and were not a product of the great Depression. 'Jewing firms'- the tailors; 'Snobs' - the boot menders and 'Dhoby firms' did the laundry. Modern 'firms' such as the 'Photo firm', required some capital outlay for equipment which would probably have been beyond the means of the junior and therefore more needy-sailor. In *Australia*, a Petty Officer ran that 'firm'. Petty Officer Gulley, the Captain of the Quarterdeck, cut my hair! - more a hobby than a necessary money spinner. All firms were strictly regulated. Prices were controlled and the 'proprietors' had to obtain permission to set up shop.

'Fishing supplemented many family diets' needs some amplification. Sailors and Officers always fished in the more remote harbours e.g. Jervis Bay, Shark Bay etc. Fresh fish was always a welcome supplement to both their diets. Naturally, fishing when on watch was discouraged. How many fish were caught by sailors in their home ports to be taken home to supplement 'family diets'?

In regard to the ratio of Senior Officers to ships in Commission. Was this an issue with the sailors? Ships can be paid off within a few weeks or even days in an emergency. Similarly, they can be speedily recommissioned. The more senior the officers or sailor required the longer it takes to train him for his higher responsibilities. A peace time cadre of officers allows for a rapid growth of the Service in wartime. As to retrenchments of officers vis-a-vis ratings and the reduction of the fleet, the author gives a figure: 'at the beginning of 1929, the Australian Fleet had consisted of eleven vessels ... By July 1930, the fleet had been reduced to four and personnel retrenchment had reduced the 1929 permanent naval figure of 4,200 by 69 officers and 639 men'. That is, one in 10 were officers. Seems fair, when compared with the ratio of officers to sailors in a cruiser. At the point of entry for officers, the RAN College, cadet numbers were reduced by 50%, 25% by January 1931 and a further 25% by January,1932. Intake was not resumed until September 1932 and the College was not back to 1930 numbers till January,1934.

S.N.L.R'. discharges ('Snarlers') were given to ratings as a consequence of gross misbehaviour or if as a result of his offence/s he was considered completely unsuitable for retention in the Service and any future employment in the Navy. I would take some convincing that 'snarlers' were awarded for mere redundancy. Many retrenched Officers returned to the Navy in WWII.

Food

Sailors will always complain about their food and are undoubtedly gastronomic conservatives. Officers, too, grumble about the food, but are more adventurous in their tastes. By present standards, the food for both in the thirties was poor. By implication, the author's paymasters are made out to be real 'nip-cheeses'. In my experience, paymasters endeavoured to use every bit of the general mess allowance, conscious all the time that any over reaching (as they often did) would land them in trouble. A paymaster who served with me and who took the radical step of introducing lettuce salad into the general mess menu was not greatly encouraged by the sailor's refusal to eat 'that bloody rabbit food'.

Ships configuration in the older and smaller ships precluded the use of the general mess system and repayment messing was the norm in destroyers throughout WWII. If the 'cook' chosen by the mess was hopeless then food was bad. But repayment messing had its advantages for a chosen sailor who could make a good 'figgy duff'! The cook of the mess had certain privileges. It was a sought after job and if the incumbent was skilled he was highly prized and kept in the job - not rostered. Often he fed his mess well and accrued a credit at the end of the month. This was used to buy food not obtained on board and for the purpose of buying it messmen were often given a 'run ashore' in ports when time did not permit general leave being given.

It is just not correct to say that galley fires 'usually went out' at sea in older ships. In very bad weather yes, but in my experience in V & W destroyers in the forties hot meals were served except when the weather precluded men from moving along the upper deck. How else would we have had our hot kai (cocoa) in the freezing middle watches? Norm King's bit about stealing officer's food was just that - stealing! And it was not pusser's food which fell off the back of a truck. It was food paid for by the officers themselves and stowed in the wardroom, Captain's or gunroom stores down aft. In the case of the wardroom and gun room this was bought, ashore, by the messman. As a midshipman on 5/- per day, I paid our messman 1/6d per day for my extra food, and an additional 3d per piece of fruit which he provided if requested. Wardroom officers, similarly, paid their messman, probably higher than the 'snotties' and in proportion to their pay. Remember, too, that these goodies and wine were used to entertain ship's guests in return for hospitality extended to officers and sailors ashore in all ports visited.

General Living Conditions

I slept in a hammock over a period of 22 years. In a seaway, they were infinitely preferable to a bunk and probably warmer in winter. They could be taken up on deck in the very hot weather and when lashed up and stowed in hammock bins, there was much more room in the mess than in messes with bunks. What was good enough for Lord Nelson, and his cot was only a Rolls Royce version of a hammock, was good enough for me! Washing facilities in the old destroyers were primitive, as they were in thousands of houses ashore in those years. But the Officers fared very little better. As Captain of a 'V & W' in late 1944 I had a 'hip bath' (Bird bath) which when not in use, was slung from the deckhead of my cabin. Alternately, in the tropics we had a kerosene tin lashed to the side of 'X' gun deck and a string released water through a makeshift shower rose. One soaped up first and then washed down, hoping that the staff at the hospital close on shore were not interested! Sailors and officers became accustomed to these minor discomforts and basked in the concern which our friends in more modern ships felt for us. We took pride in being able to compete successfully, as far as our equipment allowed, with our younger 'sisters'. I really do think Norm King exaggerated in his lurid description of conditions in Stuart with Hec. Waller in command.

Bad Officers

'All officers are human, and some are more human than others.' Admiral Burrell's comment that 'my training had suffered because of this' is difficult to understand, observing that he reached the highest position attainable in the RAN and a Knighthood. Do badly trained officers reach that goal? Ms Spurling fails to mention the RN officers of exceptional calibre. Three come to mind. Rear Admiral E.R.G.R. Evans of Antarctic fame and, in WWI, 'Evans of the *Brooke*... A most successful destroyer captain in WWII and a midshipman under Evans wrote of him 'I could not have started seafaring under a more inspiring seaman and leader of men'. ('Destroyer Man' by John Alliston DSO). Rear Admiral Wilbraham Tennyson Randle Ford who during WWII kept Malta alive and kicking. Commander Fogarty Fegen, Executive officer of the RAN College in the late 20's, who was awarded the VC as Captain of HMAMC *Jervis Bay*. What higher calibre could one get?

General Drill

The author describes this as a 'discipline drill'. Did she mean a punishment drill? They most certainly were NOT. She quotes matelot JAY who obviously had no idea of the purpose of General Drills, and no sense of humour either. He cites as a cruel order 'raise (sic) the anchor by deck o tackle'. There were several ways of weighing anchor. (a) by steam capstan, (b) by hand i.e. with capstan bars fitted into the capstan head and for the men to rotate the capstan, and (c) by deck tackle -a long and laborious task requiring the tackles to be overhauled and resecured to the cable when they became 'two blocks'. If the capstan seized up, (a) and (b) were not possible and (c) was the only way to recover the anchor. 'As you train, so you fight' is a wise saying and other favourite exercises at General Drill included 'Tow For'd' and 'Tow Aft' i.e. prepare to be towed and prepare to tow another ship. These were essential exercises for any ship and during the war they were often required at short notice, in extremely dangerous circumstances and/or at night (without lights of any kind). Well executed, they could mean and did, the difference between saving and losing a ship. I often heard the one about 'send fried egg to the flagship', but the Commander was the favourite messenger! What sailor, or officer, didn't get a great laugh at seeing his Commander (the executive officer in a big -ship) in this amusing situation. It relieved the tension in the midst of quite serious training. The whole ship was activated and when it won a particular drill the Admiral's congratulations, signalled for all the fleet to see, were a great boost to morale.

Rating Recruitment

Ms. Spurling brushes off the *Tingara* boys. In WWII they were the Chief and Petty Officers who, particularly in a ship with a large percentage of Hostility Only sailors, were invaluable. You counted yourself lucky to have a few 'Tinny Boys' in your ship's company.

In *Autocyclus* I went to the UK to commission 'PERTH' as one of six RAN Officers; a Commander, Surgeon Commander, Lieutenant Commander, two Lieutenants and a Lieutenant(E). 'Comfortable cabins'? I suppose all comfort is relative! She was about 30 years old, a coal burning tramp, and we shared, two to a dog-box cabin. Normally she carried six civilian passengers, possibly retired who had plenty of time and not a great deal of money. The sailor's accommodation was certainly spartan. Wool, not horses, had been and still was the cargo in the holds, with 'messdecks' fitted out on top of it. Space for recreation was limited to the tops of the hatches and the deck between hatches and the ship's side. For a week or so out of Durban where she had coaled, additional coal sufficient to get her to Portsmouth without further bunkering was stowed on the upper deck, thus reducing our exercise pitch by about 50%. In such conditions, with leave given in one port only, one days leave in a 40 day voyage, I fully expected some problems with the ship's company. There were no incidents of 'unrest'. I noted in my diary one suspected theft and an unfortunate incident when some senior Petty Officers were charged with gambling. I have no hesitation in saying it was a happy trip and I attribute this in great part to our Petty Officer PT Instructor, Julius Patching, later an Olympic Games administrator.

The 'luxury trip' referred to by the Melbourne newspaper referred, no doubt, to the proposed itinerary: UK to commission a new ship *Perth* and have a week or 10 days leave; New York for the 1939 World's Fair; Kingston, Jamaica; through the Panama Canal to San Diego; San Francisco; Honolulu or Tahiti; Fiji and home before Christmas 1939. The thought of seeing the world must have excited and sustained the morale of the young sailors going abroad for the first time. The incident in New York has been magnified out of proportion. In the light of hindsight it was unfortunate. The dress of the day order was probably badly communicated, but who would have guessed that some sailors preferred to wear a hot winter uniform ashore on a hot, humid, August day in New York. I can't remember all the details but I was on board that day. I certainly have no recollection, nor did I even hear of officers wearing side arms. What would an officer have done with a revolver on the crowded forecastle? Norm King's highly dramatic account of car loads of New York Police armed to the teeth as reported in a Melbourne newspaper can be discounted. Yes, it was a fiasco, and did none of us any good, least of all Australia's reputation. But I believe it was a spontaneous gesture, not the bursting into flames of any smouldering resentment.

Finally, to illustrate my point that Ms. Spurling has been misled in her research into believing that in the 1930's ships companies were treated in 'barely human terms' and were a hot bed of dissatisfaction and unrest, I draw her attention to the outstanding record of *HMAS Australia*, on exchange (not deployed where the Admiralty believed the interests of Empire lay) with a similar RN Cruiser HMS Sussex, in the Mediterranean Fleet in 1935-36. Exchange cruises were a generous RN gesture, enabling RAN ships to gain first class fleet was experience which could not be had in Australia and/eagerly sought by our Navy. *Australia* took *Sussex's* place in the 1st Cruiser Squadron with 3 other 8' cruisers, recognised as the best cruisers in the RN. She soon established herself as the best ship in the best squadron. Professionally and in sport she was consistently 'One Jump Ahead' (the title of the ship's newspaper!). The greatest

barometer of a ship's morale is her performance in the fleet and cruiser pulling regattas, particularly in a fleet of some 70 ships. For two consecutive years in that fleet, she won the Cruiser Regatta, a fear not performed since 1874. Her rugby team was unbeaten in that period by any other ship's team (including battleships and aircraft carriers). We had fleet and cruiser swimming and boxing champions and excelled in other sports. All this in an atmosphere of intense preparation for an expected confrontation with Italy over her Abyssinian invasion. There was no 'all night' leave for us in Alexandria unless we were in dry dock; mail from home took many weeks; married members of the ships company did not see their wives or families from December 1934-August 1936; and we spent an average 3 to 4 days a week exercising day and night at sea. And the result of the training was evident in the high performance of our ships in the Mediterranean in WWII, particularly the 'V & W' destroyers, *Sydney, Perth,* the 'N' class destroyers, *Parramatta, Yarra* and later the corvettes. So, is the proof of the pudding in the eating, or am I wrong?

A reply by Kathryn Spurling

I found the comments made by Captain W.F Cook, RAN (Rtd) very interesting and they are a most useful addition to Naval historiography.

An omission on my part was that I did not preface my article "A Work in Progress". The article was a paper presented for comment at an Australian Defence Force Academy, School of History, Post Graduate seminar during 1996. The paper was restricted to a 35 minute time restraint, or half of one of two Chapters on the 1930s of a doctoral thesis on the Lower Deck I am currently writing. This year Lieutenant Jason Sears will submit a PhD thesis on the Officers of the RAN, 1911-1950. I have been mindful of this and look forward to incorporating his research and acknowledging his analysis within the final draft of my own PhD thesis.

As Historians we each endeavour to shed our cultural baggage to offer an objective opinion of the primary resource material available. Narrative history is easy, analytical historical interpretation is tricky because each of us interprets a situation differently. Many points of issue are one person's interpretation. Captain Cook writes, "It is not correct to say that galley fires 'usually went out' at sea in older ships". A rating of the period refutes this-who is correct? I have no desire to challenge Captain Cook on his recollection of certain aspects of naval life. I will however defend my interpretation of certain issues.

1. In 1909 it was proclaimed that there would be an "Australian squadron manned by Australian officers and men under the exclusive control of the Commonwealth Government". A additional clause diverted control of the Australian fleet to the Admiralty "in time of war". The issue of control was also open to interpretation by the Australian Government of the day e.g. in 1913, Senator Pearce asked the Minister for Defence who indeed governed the movements of the Australian fleet, was it the Australian Naval Board or the Whitehall's representative. Senator Millen replied, "theoretically...the Naval Board has the power to direct the itinerary of the vessels. It appears to me, however entirely desirable that in this matter Admiral Patey, charged with the efficiency of the fleet, should have a free hand." (Parliamentary Debates, 22 October 1913, p.2296)

2. "Tingara" boys were a most valuable resource, much of Chapter 1 of my thesis concentrates on the preparation of boy seamen through the training ship.

3. The SNLR discharge system was abused by Naval administrators during the 1920s and 1930s. Naval Board minutes and Naval personnel files attest to this.

4. Food. General messing in some instances resulted in ship's companies being defrauded of their entitlements. One instance of this was illustrated when the 2nd Naval member, Captain Hughes-Onslow, was suspended by the Minister in 1913. Captain Hughes-Onslow asserted his suspension was because, "I would not connive in defrauding the personnel, so as to curry favour with the Minister and enable the estimates to be cut down". (Parliamentary Debates, and Hughes-Onslow, Capt. C. "The Australian Naval Board Scandal", Melbourne, 1914, p.5).

5. During the first three decades of the RAN there was persistent discontent and unrest within the lower deck, including several mutinies during World War I. My interpretation of the primary resource material available is that much of this was a direct response to the imposition of Royal Navy traditions, discipline, conditions of service, by senior RN officers on a predominantly Australian lower deck.

6. Bad Officers. From the perspective of good personnel management, awards and flag rank are not indicative or pre-requisites.

If I may digress to personal experience. At a recent Naval function during a conversation with a retired officer, we discovered that in the late 1960s I had been serving at an establishment at the time he had been Commanding Officer. His comments concerning the WRANS Unit Officer were unflattering and he admitted he had asked the Director WRANS "to get rid of her". WRANS personnel saw this particular Unit Officer as someone in whom they could confide, an officer not reluctant to stand up for her Unit members, and she was consequently highly regarded.

It is my opinion that the RAN has traditionally been a poor manager of personnel. This disregard has at times seriously jeopardised effective Australian naval defence. Over the last two decades this disregard has been acknowledged by Naval administrators, and the RAN now leads the armed forces in an appreciation of this most scarce and valuable resource. This is not to say more work is not needed on personnel issues, but lessons have been well learnt from history.

I strongly recommend examination of official files; the unexpunged version of ACNB minutes now available to readers through the Australian Archives Office, ACT, are enlightening. Similarly the official files I listed in my bibliography, which are just a portion of what is available. Whilst such material is

still open to interpretation by the reader the facts and comments stated have remained the same since the year of their creation. Over many years of research I have enjoyed interviewing RAN personnel. Unfortunately oral history is the least dependable primary source material. Memories fail, we all prefer to forget the bad episodes, stories become imperceptibly altered through social interaction. This year I have visited several RAN establishments on research trips and have interviewed numbers of ADFA graduates. On occasion one class member will listen to a member of his/her class describe some facet of their identical training and say, "I don't remember that, where was I when that was happening?". I tutor 1st year history at ADFA and am continually surprised with how many different interpretations of a single tutorial topic are offered by the Midshipmen and Cadets. History is not a dead issue, it is a vibrant living discipline, which is why we never obtain the final version, the final answer or indeed even consensus.

The Battle of Ko Chang Island.

The Most Obscure Naval Battle of World War Two?

by Graham Wilson

In 1939, Field Marshal Phibun became premier of Thailand[1]. In 1940, France was overrun by the German *blitzkrieg* and a puppet government set up at Vichy. These two seemingly totally unrelated events were to lead to the Battle of Ko Chang Island[2], possibly the most obscure naval battle of World War Two.

The battle was fought between a squadron of the Royal Thai Navy and a squadron of the Vichy French Navy off Ko Chang (Elephant) Island in the Gulf of Thailand on 17 January 1941 and led to the virtual destruction of the Royal Thai Navy as a fighting force. At first glance, it would appear odd that Thailand and Vichy France, neither nation a belligerent of the war in 1940, should engage in a naval battle, but the seeds of the action, and the local conflict of which it was a smaller part, went far back into the 19th century.

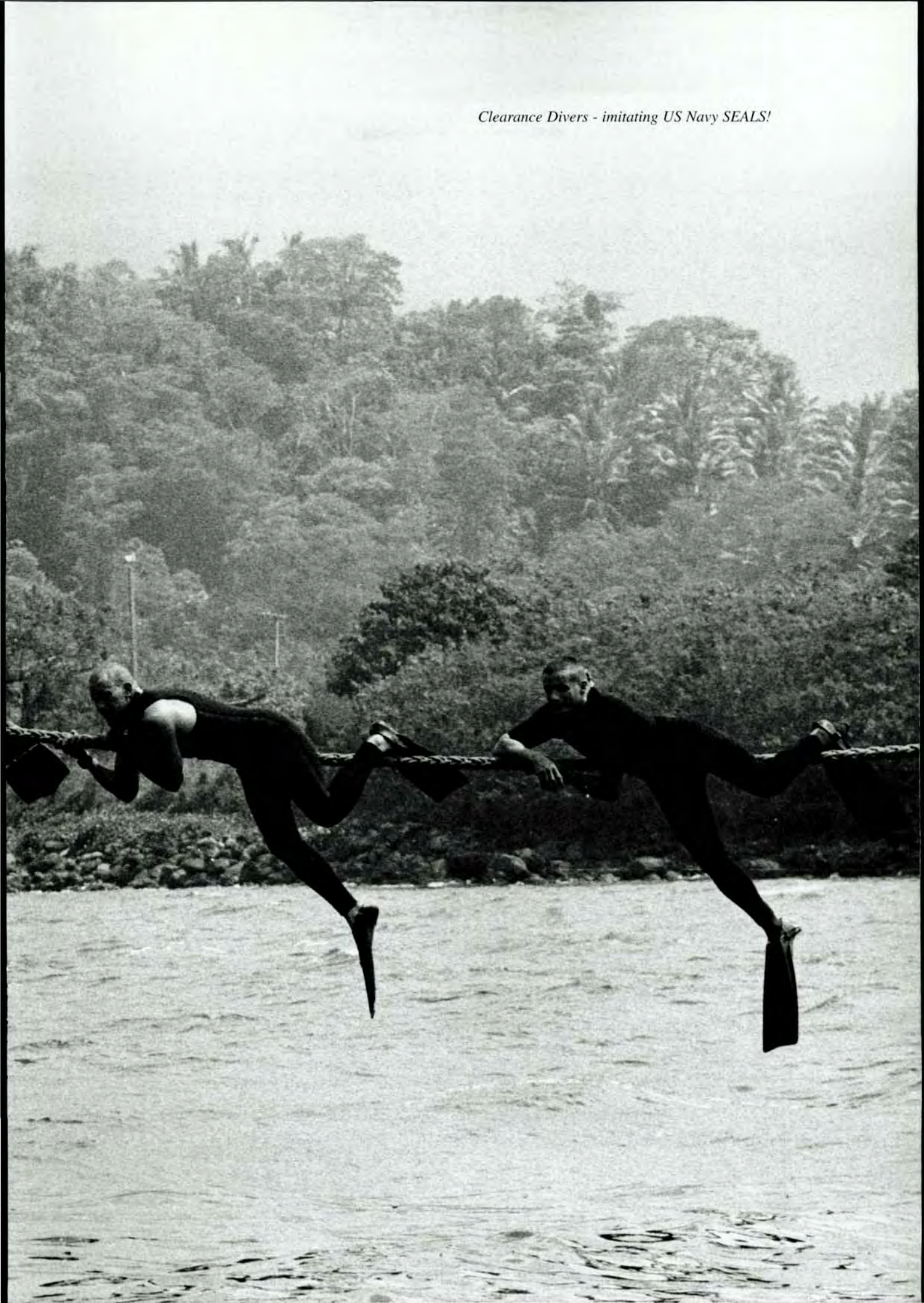
The ancient kingdom of Siam had at one time controlled large areas of Indo China, well beyond the borders of the present day kingdom and in fact well beyond the borders of the kingdom as it stood in 1940. French and British encroachments in the 19th century had seen Siam lose large tracts of territory in Burma, Malaya, Laos and Cambodia. The most bitter pill of all for the Thais to swallow was the surrendering of all vassal Lao territory east of the Mekong River to France in 1896 and loss of further territories in Malaya and Cambodia to Britain and France respectively in 1907. While cession of territory to the French and British had assured continuing Siamese independence and saved the kingdom from being swallowed up in the way of Burma, Malaya and the Indo Chinese kingdoms, independence had been won at the cost of a much geographically diminished Thailand and an embittered, humiliated and resentful Thai monarchy and people.

The Thai monarchy worked throughout the first three decades of the 20th century to the modernise the country and expand contacts with the West. In particular, the somewhat ramshackle and outmoded Thai army and navy were modernised and expanded. A series of coups and other political upheavals in the 1930s eventually saw the instalment of Field Marshal Phibun, nominal commander of the Thai army, as Prime Minister in 1939[3]. An intense, even xenophobic nationalist, Phibun yearned for a Thai return to previous greatness and set out to distance the country from its former European mentors, turning more and more to Japan for support and guidance. The result of this was that by the outbreak of World War Two, the Kingdom of Siam was an ally of the Japanese Empire in but name.

In the meantime, France had been overrun by Germany in 1940 and an ignominious peace forced on the country by the victors. The peace included an agreement whereby the northern part of the country was occupied by the Germans while the southern part remained nominally free with the government seat in the resort town of Vichy. A complication for France was the status of its quite large overseas empire. The Vichy regime held the view that it was the legitimate government of France and that the colonies therefore owed their allegiance to it. In this they very quickly got an argument from the bumptious new organisation in England going by the name of the Committee for Free France and also calling itself the government of France! With two organisations claiming to represent France, the governors of the various colonies found themselves faced with the decision of having to opt for loyalty to either Vichy or de Gaulle.

The governor-general of French Indo China, General Georges Catroux, after much soul searching, decided to opt for Vichy. The results of his decision were to eventually bring about the general's down fall. For some time, the Japanese had been active in the northern border regions of Indo China. The French authorities had permitted the passage of British and American war materials to the Chinese in Yunnan via Indo Chinese ports and territory. Emboldened by the fall of France, the Japanese brought strong pressure to bear on the governor general for these shipments to be stopped. Isolated as he was thousands of kilometres from home, the general had little choice but to give in, albeit not until after conferring with senior British and American military officers in the region and receiving their tacit approval. For his pains, the general was sacked on 20 July, 1940, by the Vichy government and replaced by Admiral Decoux, officer commanding French naval forces in the Far East.

The admiral himself, however, was not to be spared Japanese pressure. Having pushed this far, the Japanese decided to push further and demanded the right to station troops and aircraft on French soil in the north of Indo China. As with his predecessor, the unfortunate admiral had little choice but to acquiesce, although he did manage to drastically reduce the numbers involved in the agreement. Of course, the Japanese ignored the terms of the agreement and



Clearance Divers - imitating US Navy SEALS!

moved as many troops and aircraft into the region as they saw fit! The fact that the Japanese were not welcome in the colony was highlighted by clashes between French and Japanese troops, including a major engagement at Langson in Tonkin on 22 September. Hostilities escalated quickly to the point where the Japanese navy bombarded Haiphong on 26 September and only hasty, direct negotiations between Vichy and Tokyo prevented the eruption of a general conflict. These moves had not gone unnoticed by the Thai authorities and were read as signs of military weakness and lack of will on the part of Vichy. Still smarting from the loss of territory to the French in earlier times and with the nationalistic and irredentist Phibun as premier, the Thais judged the time right to take back their territory by force of arms.

The Thais were not foolish enough to launch an immediate all out attack. Instead, they used time honoured methods of gradual escalation in remote border regions. Interestingly, a Thai-French non-aggression pact had been drafted in June, 1940, in a desperate attempt by the French to stave off just such a situation. The Thais, however, had refused to ratify the pact until France returned the former Thai territory in Cambodia, a condition which France refused. Border violations by Thai troops and aircraft began in October, 1940. These violations quickly escalated into armed clashes and by early December, despite denials of involvement by both sides, heavy fighting was in progress around Vientiane. By the end of the month, the fighting had spread until it extended along the entire length of the Thai/Laotian-Cambodian border.

In the first week of January, 1941, the Thais launched an offensive into Cambodia which saw the French forced out of the town of Poipet on 7 January. French forces regrouped and a counter-offensive was planned. Reconnaissance revealed that a Thai naval squadron was operating in the waters in the vicinity of the border and Admiral Decoux decided to mount a joint operation with the French Indochinese Squadron operating in support of the land forces.

At the outbreak of hostilities, the Royal Thai Navy was a relatively powerful force and easily outgunned the French. The Thai fleet included the two new coast defence "battleships" *Ayuthia* (1937) and *Dhonburi* (1938) the older coast defence ships *Ratanakosindra* (1925) and *Sukhodaya* (1929); an old (1916) ex-Royal Navy destroyer, *Phra Ruang* (the former HMS *Radiant*); 4 modern Japanese submarines *Machanu, Vilun, Blajunbol* and *Sinsamudar* (all Mitubisiclass commissioned in 1936-37); ten modern large torpedo boats - *Trad, Puket, Patani, Surasdra, Chandraburi, Rayongs* and *Chunphorn* (all Italian Adriatico class commissioned between 1935-37) and *Kantan, Klongyai* and *Takbai* (Japanese built -1937); eight British Thornycroft type motor torpedo boats; plus a number of auxiliaries including the modern sloops *Meklong* and *Tachin* which were used as training ships but were available as combatants. To counter this formidable force, Admiral Decoux could put to sea his squadron consisting of the old cruiser *Lamotte-Picquet*; two fairly new large sloops *Admiral Charner* and *Dumont d'Urville*; and two small and ancient sloops *Marne* and *Tahure*; plus a handful of small auxiliaries. The 8-inch guns of the two Thai "battleships" easily outgunned those of the largest of the French ships. In addition, the Thais had the advantage in numbers and modernity of aircraft. On the other hand, while the relatively new Thai navy had made great strides and was considered well disciplined and reasonably well trained, the smaller French squadron was trained to a very high pitch and, perhaps more importantly, possessed a proud fighting tradition which the Thais had yet to acquire.

Admiral Decoux's squadron, under the command of Admiral Terraux flying his flag in *Lamotte-Picquet* (Captain Berenger) was cruising off the east coast of Vietnam on 13 January when preliminary orders were issued for the ships to mount an operation against the Thai navy squadron which intelligence had placed in the vicinity of Ko Chang Island. On receiving the orders, the squadron returned to Saigon for refuelling and resupply while the senior officers went to work refining plans and orders. Refuelled and resupplied, the squadron slipped away from Saigon on the evening of 15 January, the ships sailing blacked out in battle formation on a course for Gulf of Siam which had been plotted to avoid the normal sea lanes.

On 16 January, aerial reconnaissance reported four major warships in Ko Chang Bay, along with two of the large torpedo boats, four MTBs and two submarines. The four large ships were the coast defence ships. Although the bay was defended by strong coastal batteries, Captain Berenger, who was in tactical command, decided on the risky manoeuvre of attacking the Thai squadron at anchor. He decided to attack from three separate directions and divided his squadron into three divisions consisting of: *Lamotte-Picquet* (Division 1); *Dumont d'Urville* and *Admiral Charner* (Division 2); and *Tahure* and *Marne* (Division 3). The squadron approached Ko Chang Island from the south west and at about 0545[4] Division 3 split off and headed on a northerly course towards the southern shore of Ko Chang Island. This Division consisted of the two oldest ships in the squadron and was meant largely as a diversion.

The plan was for the French squadron to approach the anchorage as close as possible using the morning fog and the last of the night to cover its approach and to catch the Thai squadron by surprise at dawn, then to rely on superior seamanship and gunnery to negate Thai superiority in fire-power. Unfortunately, the game was given away at 0615 on 17 January by a French navy Loire 130 aircraft which made a final reconnaissance run over Slukpet Bay and alerted the Thais to the approaching danger. French and Thai

records are confused and largely contradictory but it would appear that the Thai ships must already have had steam up as they were able to put out to sea almost immediately to engage the French. This speaks well for the level of competence and professionalism in the still juvenile Thai navy.

The by now aroused Thai squadron slipped and made for the open sea, but found itself penned in by the confusion of small islands which lie to the south of Ko Chang Island. First salvoes were exchanged at 0615 at a range of about 10000 metres. According to French records, the Thai ships opened fire first, a mistake which allowed the French spotters to locate the Thai squadron which had been obscured by mist.

The numerous small islands, reefs and shoals in the vicinity of Ko Chang Island ensured that the battle never really developed beyond the level of a general melee. At 0630, *Lamotte-Picquet*fired a torpedo which struck *Ayuthia*. Damage to the Thai ship was serious enough to force her to drop out of the fight and attempt to make port but she ran aground on a sand bar in the mouth of the Chartaburi River and became stranded.

While the squadron flag had been engaging *Ayuthia*, the four smaller vessels had been engaged in a running fight with Thai torpedo boats. Older and generally less well armed and capable than the Thai ships, the French ships were crewed by well trained and experience personnel who knew how to extract the best from their ships and the tactical situation. The captains of the French ships skilfully manoeuvred their vessels in and out among the many small islands in order to both protect their ships and to get closer to the enemy. Skilful ship handling, coupled with good gunnery, resulted in three Thai torpedo boats, *Klongyai, Chandaburi* and *Trad* either sunk or crippled, for no damage to the French ships.

Lamotte-Picquet meanwhile had turned to engage *Ayuthia's* sister ship *Dhonburi*. The newer Thai ship's 8-inch guns outranged the 6-inch guns of *Lamotte-Picquet* but this was to prove no advantage. Like the captains of his smaller consorts, Captain Berenger was able to manoeuvre his ship so skilfully as to gain and hold the advantage over the Thai vessel. The two vessels fought a deadly game of cat and mouse among the maze of small islands. During the engagement, *Lamotte-Picquet* scored over 40 hits on *Dhonburi* but only five penetrated the Thai's armour. One hit, however, did put *Dhonburi's* forward turret out of action. Eventually, superior seamanship and gunnery prevailed and after a running fight of just over an hour, *Dhonburi* was set on fire and driven aground in shallow water at the south eastern tip of Ko Chang Island a little bit before 0800.

With five Thai ships sunk or out of action, the remainder of the Thai ships withdrew from the fight and Captain Berenger was able to order a withdrawal. Disengaging, his small squadron reformed to the south of Ko Chang Island and steamed off to the south west. As the squadron was heading out into the Gulf of Siam, it endured several determined but ineffectual attacks mounted by the Thai air force. These attacks lasted for about an hour and caused no damage. Finally at about 0930, the last Thai aircraft turned for home and Captain Berenger led his squadron south and east bound for Saigon.

The woes of the Thai navy were not over yet. Later in the day, efforts were made to tow the stranded and damaged *Dhonburi* back to port. During the recovery operation, the battered ship capsized and sank. Her sister ship *Ayuthia* was more fortunate as she was able to be refloated successfully and towed to port for repairs.

The pride felt in the (Vichy) French navy was only matched by the shock of the Japanese. The Thai navy had been heavily influenced by the Imperial Japanese Navy, which had provided training and equipment, in the decade leading up to the outbreak of the war. It was sobering for the Japanese navy to witness the destruction of a fairly modern and fairly well trained surrogate force at the hands of a force of smaller and older ships.

Although the outcome of the Battle of Ko Chang Island was not necessarily the ultimate deciding factor for the Japanese, when it was coupled with French land successes and vigorous diplomatic activity on the part of the Vichy government, it was enough to convince the Japanese to pressure the Thais into ceasing hostilities. As a result, Japanese mediated negotiations between the two parties commenced. A cease fire was declared on 28 January and a formal armistice signed aboard a Japanese warship anchored at Saigon on 31 January. Japanese sponsored peace talks commenced in Tokyo in the first week of February, 1941 and as a result of these talks, France ceded the provinces of Battambang and Siemreap to Thailand. So, even though the French Navy was triumphant at Ko Chang Island, the victory was largely a hollow one as, in the end, the Thais got what they had wanted in the first place (although it is unlikely if Thailand would have achieved its goals without the support and backing of Japan).

The Battle of Ko Chang Island must qualify as close to the most obscure naval battle of World War Two, if not **the** most obscure. Certainly I only stumbled on it by chance looking for information on something entirely different. The battle, little remarked at the time and totally forgotten today is interesting as naval historical oddity. But, oddity or not, it still contains some useful lessons. Not the least of these is the illustration of how a smaller, outgunned but better trained and better led force can outmanoeuvre and outfight a larger opponent, using superior skill, discipline, training and morale to obtain the advantage.

Some might regard the above judgements on the performance of the Thai navy as unfair, given the fact that the Royal Thai Navy was a young force with scant traditions and no fighting experience to call on. The fact remains, however, that the Royal Thai Navy was a fairly modern, fairly well equipped, fairly well trained force which, despite these attributes and the advantages it enjoyed in terms of the capabilities of its ships compared with the small French squadron, suffered a resounding defeat in its first combat action. One relatively obscure reference to the battle contends that as a result of it: "the Thai Navy was virtually eliminated." In a material sense this is not quite correct as, even with the loss of the two coast defence ships and three torpedo boats, the Thais still outnumbered and outclassed the French. On the other hand, the defeat would have come as a shocking blow to the prestige, morale and fighting spirit of the Thais. It is probable that had hostilities continued, the Thai navy would have been hesitant to venture out against the French. This, of course, is speculation, but the evidence would appear to support it.

Afterword

Both *Ayuthia* and *Dhonburi* were eventually recovered and *Dhonburi*, despite having actually sunk, was refitted (in Japan) and returned to service. *Ayuthia*, however, never sailed again. Of the three torpedo boats, *Trad* was recovered and repaired but the other two were a total loss. The Thais would probably have derived some satisfaction from the fact that the French ships were all sunk later in the war. They would also certainly have appreciated the irony that two of the ships were sunk by the Americans, *Tahure* falling victim to a torpedo from the submarine USS *Flasher* on 29 April 1944 while *Lamotte-Picquet* was sunk in Cam Ranh Bay by carrier born aircraft from US Task Group 58 on 1 2 January, 1 941. The other three were lost when the Japanese turned on the French in Indo China and launched an attack in the first week of March, 1 945.

ACKNOWLEDGMENT

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NOTES

1. Prior to 1939, the Kingdom of Thailand was known as Siam. The name of the country was changed to Thailand by royal decree in 1939 but it was still widely referred to in the outside world as Siam (and in fact reverted to the old name in 1944 following the ousting of Pribul and did not change back to Thailand until 1948). Thailand and its derivatives are used throughout the article as they are both historically correct and commonly recognisable.
2. "Koh" means "island" in Thai and "chang" means "elephant" thus, styling the site as "Koh-Chang Island" is, semantically, technically incorrect as it translates as Elephant Island. However, as the term Koh-Chang Island has come to be the accepted English form of the name, it is the one which is used throughout the article. Similarly, I have chosen to use contemporary spelling for Thai place names.
3. Born Plaek Khittasangkha in 1897. Educated at Thai military academy and commissioned into the artillery in 1917. Studied military science in France in the mid-1920s where he developed a close friendship and alliance with the lawyer and political agitator Pridi. Changed his name to Luang Pribunsongkham, in actual fact a title of nobility, in 1928 on receiving the title from the king. Served as premier of Thailand from 1939-44 and again from 1948-57. Died in exile in Tokyo in 1964. Also known as Pibul Songgram.
4. All times are local, GMT+7.

ADFA Tour of the Gallipoli Battlefield 1997

Midshipman Sarah Giles, RAN

From sipping apple tea at a café in Istanbul to a Dawn Service at Anzac Cove, the experiences were many and varied for the 80 staff and cadets from the Australian Defence Force Academy who visited Turkey in May for the Gallipoli Battlefield Tour. This trip was first initiated in 1996 and hopefully will become an annual event for the Defence Academy. It not only provided us with a greatly increased understanding of our Australian heritage and the exact context to which the Anzac tradition was forged but it also introduced us to the wonders of Europe and its ancient past.

The trip commenced with two days in Istanbul. During this time we crammed in as much sightseeing as possible, including the Blue Mosque, Haga Sofia and ferry trips across the Bosphorous into Asia. These activities were interspersed with many a donor kebab and Turkish delight. Of course, apart from the elusive belly dancers (the search for which occupied many a cadets' evening), the main attraction of Istanbul was the Grand Bazaar. Here we ran riot, haggling over the prices of fake Calvin Klein shirts, fez's, jewellery, food, leather goods – anything! Never have our arguing skills been so well practised.

Following a visit and tour of the Turkish War College, where Turkey's more senior officers are trained, we moved on to the main aim of the trip – an exploration of the Gallipoli Peninsula. From our base in Canakkale, a town on the Asian side of the Dardenelles, we set out in four groups to different parts of the peninsula to begin our trek. Before beginning, we sat on the deck of the replica of the Turkish Minelayer NUSRAT and listened to a Turkish historian's view of the campaign including the fortification of the Dardenelles and the defences which the Allied navies, including our own AE2 submarine, attempted to penetrate. I had not previously comprehended the narrowness of the Straits at this point and it amazed me that any ship was able to draw even close to the Sea of Marmara.

For me, the time at Gallipoli provided some of the most moving moments and experiences of my life. Our group started our travels in the south, at and around Cape Helles. From the towering Turkish

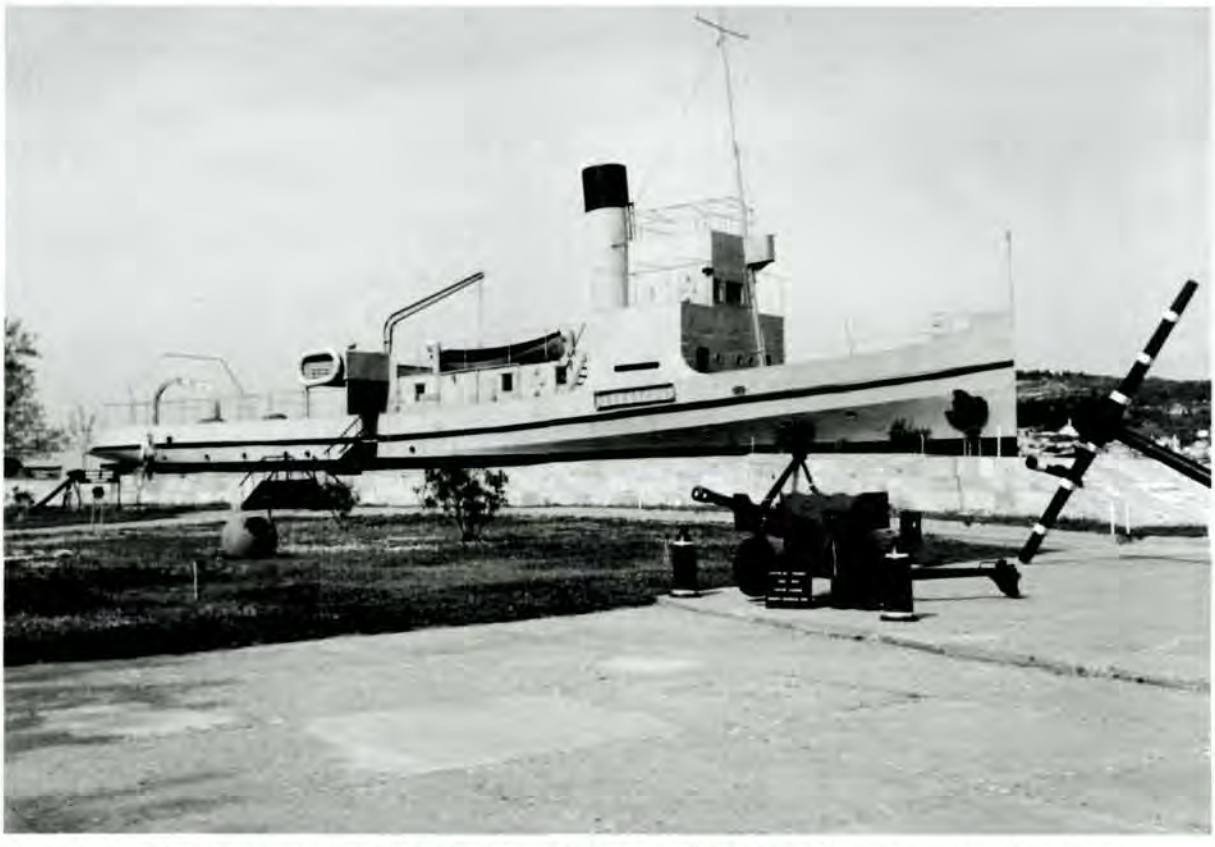
ADFA Cadets and staff resting at Beach Cemetery. Private John Simpson Kirkpatrick of 'Simpson and his Donkey' fame is buried here.

Memorial which dominated the landscape we looked across to V, W, X and Y beaches where the British and French landed 82 years ago. That afternoon we hiked up to a quant village, known in World War I as Krithia, and the site of a famous battle involving Anzac troops. The only reminder left is a small war museum.

The highlight of the trip came over the next two days during which we explored the north of the Peninsula where our country had its so called "baptism of fire". We dozed near the Lone Pine cemetery at the site where 2000 Anzac's were killed on 6 August 1915. We posed for photos at the Nek where the 3rd Light Horse Regiment, of Western Australia, charged up a ridge the width of two tennis courts only to be mown down by Turkish gunfire, as depicted in the movie "Gallipoli". A small group of us left the main road to scramble up Rhododendron Spur as the New Zealanders had done 82 years earlier in an attempt to capture Chunuk Bair, the highest point on the Peninsula. In doing so we discovered a trail of evidence of the fierce battles that took place: the remains of trenches, live rounds, a skull half destroyed by shrapnel, pieces of ceramic rum jars possible issued to the ANZAC's to provide them with some "Extra Courage" before battle, and the find of the trip – A New Zealand hat badge.

The end of our trekking phase was celebrated by drinks with the Commander of Canakkale Strait and his officers at the Officer's Club. Here we were given the opportunity to speak to many Turkish officers and gain an insight into life in the Turkish Navy and in return, the officers seemed to appreciate the opportunity to practise their high school English (it was better than our Turkish, anyway).

Our trip was concluded with further travel around Turkey in which we toured the ancient ruins of Troy and Ephesus and the supposed retirement home of the Mother Mary. A quick stopover on the way back also gave us the opportunity of a lightning tour of Cairo, including a sound and light show at the pyramids – a spectacular end to what turned out to be two weeks of experiences and emotions which will remain with the staff and cadets for some time.



Replica of the Turkish Minelyaer NUSRAT at Canakkale. The NUSRAT laid the mines in the Darndenelles which sank several Allied warships and caused the Naval attempt to force the Dardenelles to fail. Thus the land campaign was initiated.

The Master Attendant, Sydney

By Lieutenant B.J. McHarg, RAN (Naval Pilot)

The Master Attendant post is the oldest Naval appointment in Australia. "Master Attendant" is a very old British term which has generally been superseded in Royal Navy (RN) Dockyards and Naval ports by the post of Queen's Harbour Master. The title no longer appears to be in use in other Commonwealth navies, although in colonial days every Naval Dockyard throughout the Empire boasted a Master Attendant and even some commercial ports had one in lieu of a Harbour Master.

In Sydney's case a Master Attendant was first appointed in January 1821 and although the post lapsed during periods of naval decline and dockyard inactivity it has certainly been continuous at Garden Island since 1920, at least. To understand the title of Master Attendant it is necessary to consider an old RN rank of Master Afloat. In very early days few men of war were specifically designed and built as such. From the reign of King Alfred, when England was threatened, her merchant fleet was largely taken up for government service. The "Round Ships" were fitted with more guns, sometimes castles and fighting tops were added and crews strengthened, often with a detachment of soldiers. The original ship's Master and crew navigated and sailed the vessel under the Captaincy of a Knight of the Realm or the Troop Commander who was in tactical command and his men at arms provided most of the fighting complement. Such mobilisation arrangements continued for centuries and even enabled England to defeat the Spanish Armada by supplementing the comparatively small force of King's ships.

During the 17th century when ships of war became more permanent the rank of Master RN was introduced for most of HM Ships. Under the Captain, the Master was responsible for navigation, pilotage and manoeuvring and also, normally, for the stowage of stores onboard and the conducting of flag signalling. Masters were generally promoted from the lower deck and often had previous experience in the merchant service. Promotion to the rank was granted after passing an examination in navigation and pilotage conducted by the Elder Brethren of Trinity House. The Master ranked after commissioned Lieutenants of the ship but was usually the highest paid Officer after the Captain and occupied the next best cabin. His duties included instruction of the Midshipmen and other young gentlemen in navigation, and conducting hydrographic surveys in any new or poorly chartered anchorages and localities the ship visited, as well as regular musters of stores and surveys of unserviceable gear, boats and other vessels. Senior Masters generally commanded Naval storeships and transports. Between sea appointments and after retirement from active service they often became dockyard pilots and some were selected for the prized posts of Master Attendants. The rank of Master RN was gradually phased out of the Navy during the 1860's. First of all, in April 1861 the Admiralty reconstituted Master's Mates as Sub-Lieutenants and by the end of 1868 most, if not all the Masters had either retired or been made Navigating Lieutenants of Navigating Commanders depending on their seniority and ability. However the title and office of Master Attendant of RN dockyards and bases continued with the traditional responsibilities for allocating berths, local pilotage, supervising yard craft and support services. Many prominent Naval Officers, particularly explorers and surveyors rose to fame through the avenue of Master RN during the 200 years this rank was in use. Captains Cook, Hunter and Bligh are notable examples in Australian history.

In the case of Port Jackson, no sooner was the colony of NSW founded than Governor Phillip established a boat-building and repair yard on the eastern shore of Sydney Cove and ships were often hove down and refitted there or in other bays. From his previous experience in the colony Captain Hunter in 1774, saw the need for a permanent facility and staff, so he selected Mr Daniel Paine who had been trained in the Royal Deptford Yard, to be the colony's first Master Boat Builder. Paine accompanied Captain Hunter on the latter's return to NSW onboard HMS RELIANCE which arrived at Port Jackson on 7 September 1795. One of the new Governors early actions was to allocate land on the western side of Sydney Cove, opposite the original boat-building area and so HM Dockyard, Sydney came into being during 1796. For almost fifty years the Government Dockyard remained at this site, which is now occupied by the Maritime Services Board and Cadman's Cottage. Many craft and government vessels for the Colonial Marine were constructed and maintained there and visiting HM Ships refitted.

As already mentioned, one of the Master Attendant's primary functions is harbour pilotage. Sydney's first Naval Pilot was undoubtedly Mr David Blackburn, Master RN, of HMS SUPPLY, under the command of Lieutenant H.L. Ball. The brig was the first vessel to enter Botany Bay since its discovery by Captain Cook

in 1770. SUPPLY arrived there on 18 January 1788, ahead of the rest of the First Fleet. Mr Blackburn went out to meet HMS SIRIUS and guide her to a safe anchorage on 20 Jan. Mr Blackburn and Mr James Keltie, the Master of HMS SIRIUS, accompanied Governor Phillip, Captain Hunter and their boat party on the first European exploration of Port Jackson from 21-23 January 1788. The two Masters sounded the main channel up to the anchorage in Sydney Cove and, on 25 Jan, David Blackburn piloted HMS SUPPLY, with the Governor and advanced party onboard, into harbour. HMS SIRIUS and the transports and storeships followed next day. HMS GORGON, a frigate of 44 guns, was the first warship to visit Sydney, other than those of the First Fleet, when Mr Blackburn met her on arrival on 21 September 1791 and brought her into harbour, albeit touching bottom on the way in on the ebb tide.

As the colony of NSW developed there arose a growing need for Government vessels to support and communicate with the settlements at Norfolk Island, Tasmania and Newcastle. During the Napoleonic Wars HM Ships visits and their availability for Colonial duties were greatly reduced. A Colonial Marine was built up to carry out these duties, anti-smuggling patrols and pursuit of runaway convicts. Some of these ships were acquired and others were constructed in HM Colonial Dockyard. By 1820 the port of Sydney was a busy scene. The task of coping with the expanding maritime activity was too much for one or two pilots, the senior of whom was afforded the title of Harbour Master. In the dockyard the Master Builder and the Boatswain had their hands full with building activity, rigging and refits. There was no suitable person to supervise the whole organisation including the operation of Government vessels in the Colonial Marine and liaison with visiting HM Ships.

Commissioner J.T. Bigge was at this time conducting a detailed examination of the Colony's administration on behalf of the British Government. While there may be criticism of some of Bigge's inquisition and actions, he pin-pointed the problems with the NSW maritime organisation and one of his final proposals before returning to England addressed these deficiencies. The Commissioner recommended to Governor Macquarie that the experienced services of Mr John Nicholson, a 34 year old Master RN, on half-pay since the end of the Napoleonic War and at that time Master of the trading brig HAWEIS, be utilised by the Government. Macquarie readily agreed on this matter and Mr Nicholson was gazetted Master Attendant of HM Dockyard, Sydney, which duties were combined with those of Harbour Master, on 25 January 1821. He held this important and historic office for the next 21 years. Besides responsibilities for the Dockyard and the port of Sydney, he supervised harbour pilots, conducted Naval pilotage and controlled the Water Police, signal stations and the light house. He also ran the Colonial Marine under the direction of the Governor. Although the Master Attendant then was a civil post in the NSW administration and this was well before the establishment of State Navies, it was in many ways a forerunner of them and the RAN. Besides port, pilotage and police duties, the MA was in fact "General Manager" of the Dockyard and "Fleet Commander" of the Colonial Marine, and as such it was Australia's first significant Naval appointment.

Before looking as the current duties of the Master Attendant, the contributions of another ex Master RN to the development of the Port of Sydney and the Navy in NSW deserves mention. Mr Francis Hixson served in HMS HERALD under the command of Captain H.M. Denham RN from 1857 to 1861 during her Australian and Pacific surveys and rose through the ranks of Masters Mate and 2nd Master to Master during the commission. In 1861 Mr Hixson returned to NSW with an RN survey party to continue the Admiralty programme. Early in 1863 he retired from the Royal Navy to take up the appointment of Superintendent of the Steam Navigation, Pilot Board and Harbour Department of NSW. In 1871 this was reconstituted as the Marine Board with Francis Hixson as President. Furthermore, from 1862 to 1902 Captain Hixson commanded the NSW Naval Brigade and in 1901, when the Sydney Harbour Trust was created, R.P. Hickson, a descendant of F. Hixson, was made its inaugural Chairman, a position he held until 1913.

In a way, retention of the historic title of Master Attendant at Sydney reminds us of the significant role this office has played, together with the contributions of many Masters and Masters RN, in our maritime development. In the 79 years from 1842 the post changed names quite often. The various titles that today's post holder had, included Master Attendant, Port Master and Harbour Pilot. However, Master Attendant was re-instated and has been held by a serving Officer of the Royal Australian Navy since 1921. In 1995 in addition to overseeing Sydney port operations, the MA also became the RAN's National Port Services Manager. His role in the latter position is to offer guidance and direction for issues such as the environment and good neighbour policies. MA has also assumed responsibilities for pilotage and emergency towing for all nuclear powered warship visits around the nation.

MA has a moderate staff which includes Port services Manager Sydney (previously Deputy MA), Operations and Moorings Officers, Visiting Ship's Liaison Officer, Leading Stores Rate and an Able Seaman Writer, all of whom are current members of the RAN. Along with Service personnel, there is also a small civilian contingent. This includes 4 Masters, 6 Engineers, 11 Boat Coxswains, 5 Fuellers, 1 Fitter and 23 General Purpose Hands. To support this group

there a 6 civilian administrative positions. The post of MA is expected to be around as long as there is a naval presence in Sydney. History can be further enriched noting that the position of Master Attendant in Sydney is the only one remaining in the Commonwealth.

The present Master Attendant is Commander Daryl W. Bates, RAN. CMDR Bates joined the RAN as a Junior Entry Cadet Midshipman in January 1976. Attaining his BWC in HMAS VAMPIRE in 1982, he consolidated in HMAS HOBART for twelve months prior to a posting to HMAS LAUNCESTON as Navigation Officer in 1983, based in Sydney. He was appointed Flat Lieutenant to CNS in 1984, serving for Admiral Leach and then for Admiral Hudson. He undertook the RAN Long Navigation Course in 1986, duxing the course, and on completion was posted to HMAS DARWIN as the Navigating Officer. From January 1989 he undertook the RAN PWO Course at the RAN Surface Warfare School (RANSWARS) at HMAS WATSON and was awarded the SYDNEY-EMDEN Prize and the AWA Sword of Excellence. In April 1994 he joined HMAS SYDNEY as the Executive Officer. He joined the Naval Support Command on 20 November 1995, assuming the duties of Master Attendant on 1 December.

CAPTAINS OF THE PORT - SYDNEY

W.H.C.	ST CLAIR	1891-1894
W.M.F.	CASTLE	1894-1897
J.G.	JONES	1897-1897
A.W.S.	GIDSON	1897-1899
H.L.F.	ROYLE	1899-1902
G.	MOSTYN FIELD	1902-1904
W.	STOKES REES	1904-1907
C.L.	NAPIER	1907-1909
J.P.	ROLLESTON	1909-1913
C.F.	HENDERSON	1913-1917
J.C.T.	GLOSSOP	1917-1920
H.M.I.	EDWARDS	1920-1923
A.G.	CRAUFURD	1923-1925
J.F.	ROBINS	1925-1927
H.P.	CAYLEY	1927-1929
J.P.	STEVENSON	1929-1931
H.J.	FEAKS	1931-1933
C.J.	POPE	1933-1936
G.A.	SCOTT	1936-1938
H.C.	PHILLIPS	1938-1939
J.W.A.	WALLER	1939-1940
G.C.	MUIRHEAD-GOULD	1940-1944
G.D.	MOORE	1944-1950
H.A.	SHOWERS	1950-1951
G.C.	OLDHAM	1951-1953
F.N.	COOK	1953-1956
R.T.	POWER	1956-1959
W.F.	COOK	1959-1960
J.P.	DIXON	1960-1961
R.C.	SAVAGE	1961-1961
W.K	TAPP	1961-1963
W.D.H.	GRAHAM	1963-1966
A.A.	DAVIES	1966-1966
A.G.	McFARLANE	1966-1968
S.R.G.	SHARP	1968-1969
B.W.K.	HEWSON	1969-1970
L.J.	McINERNEY	1971-1973
R.G.	CRAFT	1973-1974
J.C.E.	LLOYD	1974-1974
N.E.	LEE	1974-1976
J.A.A.	McCOY	1976-1977
C.G.	BARTLETT	1977-1979

MASTER ATTENDANTS - SYDNEY

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The Navies of North Asia

After browsing Jane's Fighting Ships and The Military Balance, Commander Richard Jackson ponders the roles and capabilities of the navies of Japan, Korea and China.

North Asia is the strategic triangle that is shaping the future for our Asia Pacific region. It is here that the problems of nuclear proliferation, demands for energy, industrial competition and national rivalries overlap to create an area that is integral to the global economy and yet potentially very unstable.

New Zealand's and Australia's economies are inextricably linked with the huge markets of Japan and South Korea. You only have to look at cars and consumer electronics to realise the dominant place that those two nations have in our market place. Japan and Korea have a very deep-seated rivalry going back down the centuries and seen now in their export competition of sophisticated manufactured products. But both nations are dependent on imported Middle Eastern oil and both are seeking to invest throughout the region.

South Korea is overwhelmingly stronger than North Korea, which has become a humanitarian disaster area as its Stalinist government delivers only hunger and hard labour to its people. The future of the North is crucial to South Korea - an economic implosion in North Korea could make reunification essential but also saddle the South with huge aid bills The alternative is that the North could lash out with warfare -invading the South in an attempt to plunder Seoul's prosperity. It is against such violence that we must all be on guard.

And then there is China, which is a potential superpower, nuclear-armed and with a growing economy; one that could eventually overshadow Japan's. There is an inherent three-way rivalry between China, Japan and Korea. China is now an oil importer, it is seeking to become a major exporter of manufactured goods (just check out the products in your local shopping mall) and yet it has major territorial ambitions that extend into South East Asia.

Complicating China's relationships is the 'unfinished business' of Taiwan, another economic powerhouse yet considered by Beijing to be part of China. Depending on how China's reunification with Hong Kong goes this year, Taiwan's willingness to integrate with mainland China will be affected. At present there is a stand off, maintained by the power of Taiwan's armed forces and the backing of the US 7th Fleet.

The conventionally powered submarine Natsushio, *SSK 584*

So there are three main flash points for the nations of North Asia - North Korea, unification with Taiwan and China's claims in the South China Sea. Each of these is exacerbated by the potential 200nm claims under the Law of the Sea which has made possession of even minor rocks and islets very important to the three nations. Hence the relative capabilities of their navies is of immense relevance to both the RAN and the RNZN, even though we may seem to be far away from North Asia.

The Japanese Maritime Self-Defence Force

After their catastrophic defeat in World War Two, Japan has looked to the USN for an example and various aspects of today' s fleet are derived from its American links. But this is not a 'navy', since the post-war Constitution prohibits Japan developing armed forces. Rather, the new maritime force is a Self-Defence Force with strict limits to its operating area, its exercise patterns and to its participation in multi-national operations. However, the Editor of Jane's Fighting Ships quoted a recent Japanese newspaper comment in his foreword to the 96/97 edition, that 'the country remains psychologically unprepared for a military crisis, in the Western Pacific.'

Never the less under the pressure of the Cold War and with the former Soviet Union providing a real and close threat to Japan, the JMSDF developed into a technologically first rate organisation The JMSDF has 46, 000 uniformed personnel and another 3,800 civilians, five naval bases and 12 naval airfields.

Pride of the fleet are the new *Kongo* class air defence destroyers, designed and built in Japan to deploy the American long range Aegis air defence system. Three *Kongos* have so far been commissioned and they are the premier ships of the Escort Force, the main surface force of the JMSDF. All told the Japanese have 40 destroyers in service, with another 8 building or planned, and 20 frigates. About 30 of these ships are assigned to the five District Flotillas while the remainder belong to the Escort Force. Japan has built seven classes of destroyers, some with Seahawk helicopter capability, most with long range anti-aircraft missiles, many with Harpoon SSMs. All are powerful and impressive vessels. Generally when the Japanese Training Squadron deploys, it includes a couple of destroyers and those that we have seen 'down under' fairly bristle with modern weapons and sensors.

There are two flotillas of submarines totalling 16 diesel boats and currently four more submarines under construction. The new *Harishio* class submarines are typical: 2,500 tons, 78m length, capable of 20 knots underwater and diving over 330m (1,000 feet), they are armed with six torpedo tubes and up to 20 torpedoes or Sub-Harpoon anti-ship missiles.

One of the older destroyers, the Kurama

MCM is another major capability of the JMSDF with nearly 30 vessels in service. Japan contributed a squadron of minesweepers to MCM operations in the Gulf in the aftermath of the Gulf war. That was the

JMSDF Guided Missile Destroyer Kongo, *DDG 173*

The JMSDF has a substantial underway replenishment capability

first deployment by the JMSDF to a multi-national operation and their first deployment, other than the Training Squadron, outside of the North Pacific. Japan has participated in the biennial RIMPAC exercises off Hawaii for several years now, but they take part as a partner of the Americans and typically have not exercised directly with the other participants.

As well as warships the JMSDF operates the nation's maritime aircraft: the shipborne helos, the land-based P-3 Orions and Japanese-designed flying boats. There is also the Japanese equivalent of a Coast Guard, the Maritime Safety Agency, which operates 11 frigate-sized large patrol ships and another 37 smaller patrol ships. While not military ships. They do have light armament and could work as escorts in an emergency.

Japan has certainly developed a powerful naval force, within the country's constitutional constraints and reflecting the limitations on its operating areas.

The Chinese Navy

China's Navy is the largest naval force in the region, which is to be expected of the region's major power with its very long coastline and huge navigable rivers. According to Captain Richard Sharpe 'Chinese military publications routinely claim that over 2 million square miles of Chinese territory are under foreign occupation and that as well as extending southwards, her declared maritime security zone extends 2,000 nm into the Pacific Ocean.'

After China attempted to influence Taiwan's 1996 elections with displays of military force, and the US deployed two carrier battlegroups in response, Captain Sharpe commented 'If the Chinese hitherto had only been partially aware of the virtues of seapower and the freedom of movement on the high seas allowed under international law, their education has now been completed.'

All told, the Navy of the People's Liberation Army totals 268,000 personnel, including 25,000 in the Naval Air Force, 5,000 Marines (with another 23,000 reserves) and 28,000 personnel assigned to coastal defence units with radar aimed artillery and anti-ship missiles. About 41,000 of the total are conscripts undertaking 4 years of national service. The PLA-N is divided into three fleets: the North Sea, East Sea and South Sea Fleets. The North Sea Fleet operates in the Yellow Sea and Sea of Japan, the East Sea Fleet is deployed opposite Taiwan and the South Sea Fleet is based in part on Hainan Island and responsible for the South China Sea and the Gulf of Tonkin.

Although the Navy is viewed as subordinate to the Army and responsible for the coastal flank of China it is also a 'blue-water' force. Some readers will recall the 1980 missile tests when the CSS-4 ICBM was tested into the waters of the South Pacific (near Fiji) and HMNZS *Monowai* among others, was tasked with observing the fleet that came to monitor the missile impacts. It was immediately apparent that China had some very modern ships with an extensive range of electronic capabilities.

China's main naval force is submarines - one nuclear powered missile boat, five nuclear powered attack boats and over 50 diesel boats (mostly older *Romeo*-class submarines). Another 30 are in reserve and there is reported to be a current building programme. We can expect more nuclear powered submarines, while China is also interested in modern diesel boats, such as the Russian *Kilo* class.

18 destroyers and 24 frigates make up the main part of the surface fleet and many are armed with either CSS-2 anti-ship missiles or the 'Chinese Exocet', a modern sea skimming missile that appears to be a re-engineered copy of the famous French missile. New destroyers are being acquired from Russia, while the bulk of China's fleet comprise 400 missile and gun armed fast attack craft (another 250 are in reserve). These craft are tasked with the close-in defence of Chinese waters.

China also operates some 30 minesweepers and 50 landing ships. Given her long coast line and many rivers that is hardly sufficient minesweepers, while the amphibious force is assessed by some western authorities as too small to conduct a major landing on Taiwan. However the Chinese Navy is active among the Chinese held islands in the South China Sea including the Paracels (off Vietnam) and some of the Spratlys, for which the landing craft and fast attack craft are well suited. The role of the Naval Air Force is important, with a range of fighter, bomber and patrol aircraft dedicated to maritime operations. The PLA(N) can be expected to replace its old Badger bombers, MIG 19s and other aircraft in conjunction with the current modernisation of China' s main Air Force.

Captain Sharpe sums up the PLA-N as 'a technically fairly basic but none-the-less large and growing regional navy supported by airpower within easy reach of [its] potential battlefield".

Taiwan

In contrast to the PLA-N, Taiwan has a smaller but much more balanced fleet with modern frigates as the core of its Navy. There are 30,000 personnel in the Navy and another 28,000 in the Marine Corps, and 32, 000 naval and 35,000 marine reserves. Clearly the ability to expand on mobilisations an important factor in Taiwan's defence posture. The Navy and Marines do depend on conscription with 2 years being the standard period of national service.

Taiwan's frigate force is centred on seven FFG-7 class frigates with Taiwan's own development, the 'Flight 2' FFG currently entering service. As well six French designed 'stealth' frigates are under construction and there are nine of the older American *Knox*-class design. Taiwan has also maintained a destroyer force of 18 ex-American WW2 era destroyers, *Fletcher* and *Gearing*-class ships, but they have all been upgraded over the years with modern sensors and weapons. The helicopter-capable ships can operate Seahawk helos for Over-The-Horizon targeting, surface surveillance and ASW roles.

Complementing the surface fleet are four modern diesel submarines, 12 older boats, 50 missile armed fast attack craft and 20 amphibious ships. There is one fleet replenishment tanker to top up the frigates and destroyers on long operations.

In his foreword to the latest *Janes*, Captain Sharpe notes that 'Taiwan's ability to defend herself should not be underestimated' but for Beijing, 'there will be no backing down over the reunification of Taiwan.'

The Two Koreas

Even as I was writing this article tension in Korea rose after a top Party leader defected from North Korea and took refuge in South Korea' s embassy in Beijing. North Korea has turned itself into a fortress state at great cost to its people and economy

North Korea's Navy is designed to assist the Army with its concept of a rapid offensive into South Korea and also to provide coastal defence to North Korea itself. It has at least 46,000 personnel (perhaps as many as 60 000) and conscripts do five years of national service.

The main arm of the North Korean Navy is comprised of submarines; 22 *Romeo*-class boats, an old Soviet designed but now built in North Korea, as well as 20 more modern coastal submarines (like the one that went aground in South Korean waters last year) and some 48 midget submarines intended for covert coastal operations. The *Romeo*-class submarines do give North Korea the capacity to interdict supply ships sailing to South Korea from Japan or from US bases in the Pacific and so mean that adequate antisubmarine forces would have to be deployed at the start of a future Korean War.

The surface fleet comprises three frigates armed with CSSN-2 anti-ship missiles and over 40 missiles armed fast attack craft in addition to another 60 armed with guns and torpedoes As well as these the North deploys at least another 60 patrol craft for local defence.

Then there is an amphibious capability, with medium landing craft capable of carrying tanks. Most numerous, are the 100 or so *Nampo*-class fast landing craft. These are North Korean built craft, based on the Soviet P-6 torpedo boat design, capable of carrying two platoons of troops at 40 knots for over 300nm. They would be excellent for rapid, widespread, clandestine landings of raiding parties any where along the South Korean coastline.

In an unclassified 1991 assessment the US Defence Intelligence Agency comments that the North Korean

The heavily modified ex-USN Gearing class destroyer Kwang Ju

Che Ju, *an Ulsan class frigate*

Navy's capabilities "have improved significantly as a result of indigenously producing various types of support and landing craft. The Navy could act in a strong supporting role in the initial stage of an offensive. During amphibious landings, the Navy would support ground forces by providing shore bombardment and logistic resupply [but] with limited capability ... it would have to curtail naval support to troops soon after landing. If confronted by strong forces, the North Korean naval forces would revert to largely defensive roles.'

South Korea of course has to take these capabilities into account with its naval force structure. In the South there 34,000 people in the Navy and another 26,000 in the Marine Corps. Both Navy and the Marines have a total of 19,000 conscripts at any one time, who have to serve 2 1/2 years of national service This ensures they have a large reserve of nearly 40,000 with reasonably current experience.

The South Korean Navy has a strong ASW and anti-surface warfare focus, with seven destroyers, 12 frigates and 29 corvettes, many of which were built in South Korea. The older American destroyers have been distinctively updated with modern weapons and sensors, while some of their ships are helicopter equipped with Westland Lynx helos.

South Korea has nine Type 209 German-designed submarines and about a dozen midget subs. The small

Type 209s would be very useful for inshore offensive patrols, while the midgets could conduct clandestine insertions or undertake anti-shipping attacks into defended harbours.

There is a small mine countermeasures force of 14 ships and an amphibious capability with LSTs and LSMs. Two replenishment-at-sea tankers enable the surface force to deploy and remain on station with good endurance.

Conclusion

The navies of North Asia show the full range of modern naval capabilities, with surface-to-surface missile armed combatants from destroyers down to fast attack craft, providing the main combat power of these five navies. Because of the large number of submarines in the region, ASW will be a major factor if conflict were to break out. In fact the range and capability of the various submarine forces would mean that any conflict could readily spread into the wider Pacific especially if seaborne reinforcements were targeted by one of the combatant states.

The other areas of naval combat will clearly be amphibious operations and mine warfare The mining problem in time of conflict could be extensive because both air-dropped and submarine laid mines could be deployed by any of these nations. The value of the Marine units is high in the North Asian region, because of the long coastlines and the strategic islands open to assault. The complexities of amphibious operations will ensure that major surface warships are required for command and control as well as for air defence and fire support.

New Zealand and Australia have strong economic reasons to promote stability m the region as well as having democratic sympathies for the non-communist states. Therefore our ability to rapidly contribute effective naval forces if there were to be a UN, or similar, collective response to conflict would be important - indeed proportionately more so in my opinion than simply sending troops or aircraft. Highly trained naval forces would be vital in maintaining South Korea's supply lines for example and ships from our navies could make a very practical contribution should a multi-national force ever be needed.

A South Korean Type 209 submarine

The light frigate Chon Am

Book Review

U-Boat Far From Home
by David Stevens
published by Allen & Unwin, Sydney, 1987

Reviewed by Marcus Loghem (LEUT RANR)

> "Though it (submarine) is no more able than any other ship to cover the entire sea, it will however do so in the mind of the enemy, in whose imagination the submarine's invisibility confers the gift of omnipresence. Fear therefore leads the enemy to take constant anti-submarine measures, just as if there were one to be found in every mile of sea."
>
> Admiral Raoul Castex of the French Navy, 1937

For a short period of Australia's history during the Second World War, it seemed there was a German U-boat in every mile of sea around our coast. We have often read that the Japanese forces at the time succeeded in flying over Australian territory and bombed Darwin, but the story of U-Boat 832 is less widely known, until now.

In *U-Boat Far From Home*, David Stevens has shed light on Naval activities during the Second World War that occurred around Australia and in our near region and that have gone largely untold in post war accounts. The book concerns itself with the German U-Boat activities in Asia, particularly following the war-time exploits of the U-Boat 862, her captain Heinrich Timm and crew.

The account of U862 is set amidst Admiral Donitz's plan to project German submarine operations from the Atlantic through the Indian Ocean to the Pacific in an attempt to cut the supply lines to Europe and shake up the Allied shipping in the east. The book focusses on Captain Timm and the boat's crew during the deployment to Asia, around Australia and New Zealand, as well as looking at the search for this submarine within Australian waters.

As becomes evident in reading the book, the existence of an enemy submarine within Australian waters at this time was not something that Australia was overly prepared for in terms of dedicated anti-submarine forces and hence the failure to deal with this unexpected threat. In view of this lack of capability to respond, one can only imagine the havoc that a serious submarine campaign against Australia would have caused had the Axis powers been able to press such an offensive. Thankfully neither Germany nor Japan were able to successfully project additional forces to Australian waters at this time or the course of Australian history may have changed dramatically.

David Stephens has illuminated further a period of Australian history during which we suffered the existence of hostile forces within Australian territory. Though all are no doubt aware of the Japanese bombings in Darwin, this latest chapter brought to our attention is significant in that it was unknown by most for a long time, and even now highlights the stealth and potential dangers posed by submarine forces.

They can be there, but no one knows where, why and for what purpose.

This is not unique to the period in question in this book as this capability and the threat it may pose remains a recognised dimension in today's maritime forces as well. Given Australia's dependence on trade and secure sea routes, as well as the growing regional interest in acquiring this capability, *U-Boat Far From Home* is a timely reminder of the dangers of submarines and of the need to be prepared so as to limit or prevent such dangers impacting on Australia again.

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A Few Memories

Sir Victor Smith (ANI Press, Canberra, 1991), 72pp (B5). Softcover. Price to ANI members $5.00, non members $7.50 (includes P+H). Sir Victor highlights his long and distinguished career and illustrates the tremendous changes that took place during his record 49 years of service.

Military Strategy: A general theory of power control

Rear Admiral J.C. Wylie, USN (ANI Press, Canberra), 111pp, (B5). Softcover. Price to ANI members $5.00, non members $7.50 (includes P+H). RADM Wylie questions the validity of old military strategy concepts and poses new questions. He further discusses the Mao theory of wars of national liberation.

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