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In order to achieve the stated aims of the Institute, all readers, both members and non-members, are encouraged to submit articles for publication. Preferably, submissions should be typed, double spaced, on A4 paper; the author's name and address must be shown clearly, even if a pseudonym is required for printing purposes; to be eligible for prizes, original articles must be accompanied by statements that they have been written expressly for the ANI; and short biographies will be welcomed. The Editor reserves the right to reject or amend articles for publication.

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Views expressed in this journal are those of the authors, and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.

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CONTENTS

Cover:
HMAS Rushcutter undergoing sea trials.

Photograph courtesy Minehunter Project Office

FROM THE PRESIDENT

The defence debate in Australia can only have been enhanced by the release in March by the Government of its long awaited White Paper, in which elements of the Dibb report of 1986 have been amplified and developed. For the first time in many years defence planners are guided by Government policy set out and enunciated in the parliamentary forum and this augurs well for future force structure. ANI members can be reassured by the support shown by government for the maritime environment and the White Paper provides a bright outlook for Navy. New submarines and frigates will amply support the fighting capabilities of our DDG destroyers and FFG frigates while recognition by Government of the need for Australia to have a two ocean navy is also heartening.

The ANI will find an avenue to promote the debate in the public arena through the Seapower seminar in October but it is necessary for the Chapters to encourage members also. I am pleased to report that the Canberra Chapter has begun just this activity in lunchtime meetings, at the Defence Academy. The first of these meetings was held on 31st March and was addressed by Lieutenant Commander Alan Hinge who chose the provocative and stimulating subject of the changes to defence thinking which might come from adoption by Australia of an Exclusive Economic Zone (EEZ). Those members who attended found the forum to be lively and discussions had to be cut short when time ran out. Details of future meetings of the Canberra Chapter are provided elsewhere in this issue of the Journal.

Council is actively looking at ways to improve the ANI membership situation reported at the February Annual General Meeting and the results of this work will be advised to members as soon as possible. Personal recruitment will always be our best means and I encourage everyone to try hard to find one new member each during 1987. One other piece of pleasing news is that through the interest of one of our members the ANI might yet enter the publishing business as the ANI Press. Council is assessing a proposal which might see the ANI able to begin by reprinting books on maritime subjects and then lead into realisation of our wish to publish Chaplain Thompson's interesting history of Garden Island Dockyard. More details of these initiatives will be released as they become known.

Planning for the ANI seminar is proceeding well. Remember to book early and do contact the organisers if you wish to be involved in any way. Commodore Ian Callaway can be reached on (062) 655270 and I am sure he will welcome any offers of help. Timing of the seminar to coincide with the run up to a Federal election and also to take advantage of the submarine and frigate decisions which will be taken this year should help to promote the discussion and debate the ANI seeks. Council looks forward to a successful event and I hope that all ANI members will give the seminar the support it needs.

Sincerely
Alan Brecht

FROM THE EDITOR

In years to come, 1987 may be known as a watershed year in the history of the ADF. The release of the first defence White Paper for 11 years has given a new and much needed impetus to the development of a coherent defence strategy and the document should form a sound basis for capability selection. However, to capitalize on the guidance given by the White Paper, members of the forces and interested members of the public will be called upon to provide a quality of thought and analysis capable of matching and supporting the political objectives of government.

As the new editor of JANI I would very much like this publication to act as a forum for constructive debate on issues relevant to the Navy and maritime matters generally. Constructive debate can be stimulated by anything from well researched scholarly work to work involving a degree of 'hip-shooting' tempered by years of experience in the field.

In this issue, Mr John Payne of the Department of Defence offers suggestions aimed at maximizing cost effectiveness of spare parts acquisition in the Department. Veteran ANI contributor Tom Frame has also made a contribution dealing with Australian Naval History and the gaps, in terms of dedicated research effort, which are still in it. Tom's paper is based on his very well received Address to the 1987 ANI Annual General Meeting. Also, I could not resist the temptation to have my say and a piece on mine warfare is included.

I thank the membership of the very active Perth Chapter of the ANI for making a number of contributions for publication to the jounral. The first one for 1987 appears in this issue and deals with the role of submarines in Australia's defence; past, present and future. This work also offers some timely and keen insights into 'risk management' of the New Submarine Construction Project.

This issue would probably not have come to you had it not been for the solid support of the rest of the newly formed ANI Editorial Committee — John Hyman, James Goldrick and Bruce Klimeck. John, our previous editor, served in the post for about 18 months and I congratulate him on his excellent work. I look forward to his continued support and the support of the rest of the team.

The deadline for material to be included in the August issue of the journal is Friday 10th July. Photographs, diagrams or charts to support the written word in articles is always welcomed.

Finally, included with this issue is a brochure giving details regarding the 1987 ANI Seminar scheduled for 16–17 October in Canberra. While the 'glossy' brochure will not be out until closer to the event it was decided to give JANI readers the first opportunity to register interest. So, seize the initiative and start planning to attend!

Alan Hinge
(062) 66 2066

CORRESPONDENCE

A LETTER FROM ENGLAND

Sir,

The end of 1986 has not been easy for the Royal Navy. A number of problems are coming to a head in both operational and budgetary areas and it is apparent that not all will be resolved as the Admiralty Board would wish.

Problems continue with the combat data systems for the Stretched Type 22s and the Type 23. While the first version of the Computer Assisted Command System (CACS) is now undergoing Part IV trials in *HMS Brave* and giving encouraging results, it is still far behind the original schedule and, although rated as '90% effective' in the glib terms of its manufacturer, has not yet met its Staff Requirement.

CACS 4, the system intended for the follow on Type 23s, is causing such problems that the RN is putting the work out to a new, open contract — despite the fact that Ferranti have been allowed to go some way down the line.

The future of the eight unstretched Type 42s is also an issue with direct and considerable implications for the future of the escort force. The RN has two problems with these ships. The first is as to whether the platforms themselves, cramped and awkwardly laid out, are worth extensive modernization beyond the 'restorative refits' currently in progress.

The second concerns the future of SEA DART, a missile which has considerable potential for improvements but which will require the expenditure of enormous amounts of money to achieve it and which is, in any case, not a suitable candidate for installation in escorts of the twenty first century. It is manifest that SEA DART will be serving until approximately 2006 but it is not a vertical launch system and has not been subject to the attention devoted by the Americans to their STANDARD family of missiles.

SEA DART II and a later post-Falklands package which proposed work which amounted to much the same thing have both fallen by the wayside, the first a victim of the Nott Defence Review and the second of the present restrictions on the Long Term Costings.

The next problem for the Royal Navy concerns the vexed question of the building rate of the escorts. The Controller has now admitted that the numbers required to sustain a fifty ship force are not being achieved and that the RN can no longer expect it.

The alarming point is that the achieved rate, when measured over the last decade exclusive of the Falklands replacement programme, is under half of the requirement. There are few signs of any improvement in the future. In effect, this will reduce the escort force to approximately 36 in the next decade.

There were attempts to propose extra construction as an industrial relief measure, a step which had considerable appeal. Although, however, the idea was entertained at Cabinet level, the measure was successfully resisted by those departments which would have had to find funds in favour of the MOD.

The other possible source, the contingency funds, proved too closely guarded by a Treasury acutely aware of how well the Services had done during and after the Falklands.

Several difficulties are apparent in the longer term. The second stream which the Admiralty Board intends to follow is the NFR 90, the international project for a replacement frigate. Sketch proposals suggest that this will be primarily an AAW ship — and thus a logical counterpoint to the ASW Type 23 — but there are already signs that joint development is becoming increasingly subject to stresses induced by conflicting requirements. The most notable debate is that between those nations which confine their activities to the NATO area and those which do not. If the schedule intended by Britain is to be met, then formal Project Definition Studies must have been commenced by the end of January 1987. This is unlikely to have happened.

Matters for the seagoing navy are unlikely to be improved by the enthusiasm of the Defence Sales organization which is actively pursuing the possibility of sales of the Type 23 to Pakistan. Although the latter withdrew from the initial agreement for three 'improved Type 21s', this was due more to a consciousness that there were better things available than any financial problems. The Pakistanis have the funds and they are acutely interested in the Type 23. There is, however, fierce competition from the French and it was probably due to this that the Defence Sales team offered the third Type 23, ARGYLL, as the first Pakistani unit if the sale went ahead. It is of some interest that neither the Naval Staff nor CINCFLEET were aware of this possible dislocation to the future Green List until some months after the event.

The accompanying problem, aside from the obvious delay in putting another RN Type 23 into service, is that any Government announcement of a replacement order — which would presumably come at the same time as confirmation of a Pakistani buy — would only

serve to confuse matters further. It would enable the Government to delay follow on orders to complete the planned batch of eight while maintaining the pretence that Type 23s are being ordered at a sufficient rate.

The real difficulty is not in fact the reduction of the escort force, even if the final numbers seem a dismal prospect. The problem lies in the inability of the Ministry to convince the Cabinet that the Royal Navy is physically incapable of meeting the commitments allotted it. The recent delays over force level reductions in the Falklands are an example of this; a hawkish (after the event) Foreign Office persuaded the Prime Minister the reductions in 1986 would be inopportune, although they made no allowance for the fact that the surface fleet has lost several units from its inventory. The arithmetic of the Falklands and Armilla deployments is simple. Two frigates or destroyers on station in each area mean two more coming, two going and two recovering, a total of sixteen ships. Fifty ships represent the minimum force which can carry this load and the NATO and national commitments to which Britain is engaged.

The total was down to 47 by the end of 1986, it will reduce to 44 by the end of the next year, with the successive deletion of more IKARA LEANDER class frigates and the remaining DLG. 1988 is unlikely to see a halt in the rate of withdrawals from service since the unmodernised gun LEANDERS and the brace of Type 12s must go before the end of the decade.

The RN is moving towards an admission that it is the navy's task to concentrate on NATO tasks if the government is unwilling to provide the funds which would allow it to do more. Necessity is the enemy of desire; such a contraction in admitted responsibility must be very hard for the present leaders of the RN, nurtured as they were in a world-wide service, to accept. But accepted it has been.

So the force development arguments are being presented in terms that NATO understands. The irony here is that the strongest submissions are not those concerning the escort force, but those proposing acquisition of larger units. The Navy may have accepted its restrictions but it will still be balanced.

That this is so is clear from the emphasis which is being placed upon the proposals to retain an amphibious capability. The RN is determined to replace INTREPID and FEARLESS, the desired option being two more aviation support ships after the fashion of the new RFA ARGUS but with modifications for amphibious work.

The perhaps unseemly haste with which HERMES was put on the sales list was at least partly due to a consciousness that further aviation support ships would be very difficult to obtain if Treasury were able to point to the presence of a well maintained HERMES in the reserve fleet. With the shortages of personnel, it would be very difficult to scrape up the crew for HERMES, even if the old ship had been kept in a running condition. Another aviation support ship, with a much smaller crew but a reasonable aircraft capacity, is a manageable proposition for the RN. Two more would be ideal.

So the future is not entirely dark for the navy. What remains to be seen is whether or not even the markedly reduced escort force levels can be maintained.

I have my doubts.

Master Ned

The 1893 White Paper

Sir,

As we read the 'new' 1987 White Paper on Australia's defence we may find it instructive to compare it with the 1893 White Paper! Printed below is a copy of the 1893 Defence Scheme of New South Wales. Let the reader substitute a few place names and reflect on just how much our defence analysis has improved in the last century.

Defence Scheme of New South Wales
General Scheme

The geographical position of this Colony and its now considerable population renders it comparatively little liable to aggression from any foreign Power. In view of the military force now in existence and the strong spirt which animates it, territorial aggression, except on a large scale, would be impossible. No Commander would venture to land small bodies of troops on the shores of the Colony, knowing well that it must be but to court disaster, with consequent injury to the prestige of any Power which attempted such a policy. Any force destined for aggression, even if safely landed, would necessarily have to be of sufficient strength to conquer and hold either an important strategical point or a considerable portion of territory, under the certain condition of jeopardizing, if not of losing completely, its communications by sea.

II. For any enemy to undertake field operations on New South Wales territory, a large expeditionary force of all arms fully equipped would be required. The small landing force available, even from a strong squadron of cruisers, would find such a task impracticable.

III. Such an expedition, whether dispatched from an advanced strategical base, or from Europe, could not, under the most favourable circumstances, reach its destination until the British navy had been definitely worsted.

IV. The most probably form of attack on the New South Wales Littoral would be by means of raids of an enemy's cruisers based on his defenced ports. Such raids might possibly be undertaken to obtain coal which might be urgently needed; or for the purpose of levying an indemnity under threat of bombardment; or to effect a hostile diversion and create a local feeling of insecurity. For such a purpose, none but second-class cruisers and such torpedo-boats as can be carried by the same need be reckoned with. The nearest defended port belonging to a foreign Power is Noumea, distant 1,100 miles from Sydney; the next is Saigon, 4,000 miles from Sydney; and the next Vladivostock, 5,200 miles from Sydney.

V. Noumea does not however possess the qualifications of a strategic base, and Vladivostock is closed during four months of the year by ice.

VI. The naval power of Great Britain in Australian waters is far superior to that of any other Power or combination of Powers, and its strength can moreover be more readily increased than can that of any other Power.

VII. The above conditions are the solid basis on which the standard of the armament of New South Wales should rest. Much exaggeration of danger and many erroneous conceptions of what is really to be apprehended might have been avoided if the above facts were more widely realized.

VIII. The adequate defence of this Colony must however be based on other grounds besides the immediate possibility of aggression from a foreign Power. Complete security for life and capital must be assured not only to the population now existing in New South Wales, but that security must be further assured in the eyes of the commercial world beyond its immediate shores. Any feeling of distrust in the defensive power of the Colony would be inevitably followed by a want of confidence on the part of those capitalists who have so largely promoted the commercial interests of the Colony. It therefore follows, as a matter of vital importance, that the security of the Colony for defence should be placed beyond all possibility of doubt, and that the security of capital invested in this country should be assured in the event of any possible warlike complication in which Great Britain might be involved.

IX. The importance of Port Jackson (Sydney) as the strategical naval base of the southern seas is an additional reason which renders the security of the Colony, and this port in particular, a question of vital consequence, not only to the well-being of the Colony itself, but to the supremacy and maintenance of the British navy charged with the protection of British interests in Australian waters.

X. New South Wales possesses a coast-line of approximately 600 miles with two ports of great commercial importance, the defence of which must necessarily, in any Scheme of Defence, be absolutely secured against either a combined attack of a strong squadron of cruisers, or from a partial raid by fast armed vessels of the enemy.

XI. The long coast-line, with numerous harbours and many practicable landing-places, renders raids for such purposes as have been enumerated above a possible, as well as an obvious, danger.

XII. To meet the above requirements, therefore, it appears essential for the military force of New South Wales to fulfil the following conditions:—

(a) To provide a complete defensive force for the protection of Sydney, Newcastle, and of Wollongong-Bulli.

(b) To provide an adequate, well organized, and thoroughly equipped force, which shall be capable of being moved into any part of the Colony at the shortest notice.

XIII. The long coast-line and comparatively small military force at the disposal of the Colony render it most unwise to break up its disposable force into smaller fragments than are necessary for the defence of the important strategic positions enumerated in (a).

XIV. Sydney is the focus of the lines of railway, telegraph, and tram-way in New South Wales, and is the obvious strategical centre of the Colony. The railway and telegraphic communication is, moreover, of a very complete nature, and renders it comparatively easy for a force centralized at Sydney to be dispatched to any point where an enemy, for raiding purposes, may have landed a hostile force, or to any locality where a feeling of insecurity may demand temporary assistance.

XV. The defence of Sydney, Newcastle, and Wollongong-Bulli having been adequately provided for, the feature of paramount importance becomes the effective organization of the Movable Column, which, consisting of all arms, constitutes the real Reserve of the Colony. Especial care in this Scheme has, therefore, been devoted to the organization of a column which shall answer the above requirements, as enumerated in (b).

XVI. The existence of such a column would not only promote a feeling of security throughout the Colony, but it would constitute a guarantee for effective military operations being conducted against a hostile force which it might be possible for an enemy to land on the long undefended coast-line of New South Wales. It is proposed to

so organize and constitute this column that it shall be ready at the shortest possible notice to conform to any orders which may be dictated to it by the Government of this Colony.

XVII. It has been considered necessary to recommend the allotment of a portion of the now existing Naval Brigade to naval duties in connection with the protection of the ports of Sydney, Newcastle, and Wollongong; and a portion of the Naval Artillery Volunteers have, in like manner, been allotted to distinctly artillery duties in connection with the defence of Sydney. It will be for the Government to decide as to what role the balance of the existing Naval Brigade unappropriated to the defence of the coast of New South Wales should fill.

XVII. Having the above principles in view, the Colony has been divided into the following districts:—

1. Port Jackson District.
2. Botany District.
3. Sydney and Coast District.
4. Newcastle District.
5. Movable Column: Reserve of the Colony.

Head-quarters, Sydney, New South Wales, September 5, 1893.

Is there nothing new under the sun?

Joe Straczek

CHAPTER CHATTER

by LCDR Ian Weekly, ANI Chapter Liaison Councillor

As the new Chapter Liaison Councillor, I now have the challenge of meeting one of the Institute's 1987 objectives; namely to promote Chapter activity.

Obviously, and as past experiences have shown, Chapter liaison cannot be achieved by 'remote control'. Thus having been posted as the RAN Personnel Liaison Officer the travel involved made me an obvious candidate . . . and I volunteered!

My first task is to find a way to tap the local membership resource in areas where Chapters do not exist. Trying to liaise and canvass interest and volunteer conveners by letter is very hit and miss, time consuming and frustrating. So, when members hear of planned Personnel Liaison Team visits, please also think of the Institute and the Chapters.

What I ask for is that Institute members in NSW, QLD (both Cairns and Brisbane) NT, SA and TAS do some soul searching, think about what might be achieved, identify who might be able and interest, then contact me.

Ere you read this article, I will be 'on tour' and meeting up with as many 'possibles and probables' as I can. It may be that someone in your area is already starting the ball rolling. Please cast about to find out any developments, and be ready to offer your help.

The 1987 Seapower Seminar is an ideal talking and general interest focal point. You may care to discuss coming to Canberra to attend. By discussing the issue with fellow members you may come up with solutions to: fare problems (eg RAAF Flights/car pools), accommodation (your Canberra mates) and leave (. . . will I have to take leave or does it fit in with a duty trip?)

If you have any enquiries concerning the Chapters or the Seminar, please contact me as follows:

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CAMPBELL ACT 2601

TELEPHONE Work (062) 653314
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And please remember, neither the Institute nor the Chapters, nor the Seminar are 'Officers Only' affairs. Encourage any personnel at any rank to participate in the defence debate through the Institute and its Chapters.

Ian Weekly

CANBERRA CHAPTER INTRODUCES LUNCH TIME MEETINGS

The Canberra Chapter of the Australian Naval Institute has introduced lunch time meetings for 1987. A wide variety of subjects will be covered in the monthly talks and discussion forum, which will be held in a lecture or seminar room at the Australian Defence Force Academy on the last Tuesday of the month. The meetings will be open to members and guests; we hope the midshipmen and officer cadets at the Academy will attend also.

LCDR Alan Hinge, our esteemed editor, volunteered to give the inaugural talk. His topic "Some Defence Implications of an Australian EEZ" produced some animated questioning from the small but select audience, following his proposal to use seamines as cost effective 'Robot Policemen'. Alan's Defence Fellowship paper dealing with the use of mines in limited war contingencies has been published by the Department and it includes much more on this controversial subject. We look forward to his participation in debate on a wide range of maritime defence subjects through the forum of the Chapter Meetings.

The arrangements for the first meeting worked out satisfactorily when considering I was late in getting out some of the publicity material. The Academy is a very suitable location although very busy. This may result in the lecture room varying from month to month. Please ring me to check location a day or two prior to the meeting if in doubt concerning the meeting location. Meetings will usually be conducted in Lecture Theatre 13, North Block, ADFA.

Also, make a note in your diaries for the following:

Tuesday 26 May — LCDR Caroline BRAND RAN "Career Aspirations for Female Naval Officers"

Tuesday 30 June — CMDR Maxwell SMART RAN "On Surface Combatants"

Tuesday 28 July — CAPT Paul KABLE RAN "Australia's Strategic Outlook"

For more details please call 66 2984. Volunteers to give further talks cheerfully accepted!

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IMPROVING SPARES PROCUREMENT IN THE DEPARTMENT OF DEFENCE

By Mr John Payne, psc

The management of Major Capital Projects within the Department of Defence has been the subject of a series of scathing government enquiries in recent years. The enquiries have produced reports highlighting gross deficiencies in the present practice of procurement within the department and defence procurement inefficiency is now simply a matter of public record.[1]

A major deficiency mentioned in all reports is the escalation of costs within Major Capital Projects. This escalation is often compounded by failure to assess alternative cost saving options during the evaluation of project proposals.

A large proportion of project cost is taken up by spares procurement, the cost of which is often 30–40% of that of the prime equipment being procured. Spares procurement is an area sometimes overlooked during project evaluation, but, at the same time, is an area where significant cost savings may be made.

My main objective in this essay is to identify practical methods for improving defence spares procurement. However, it is first necessary to define exactly what Capital equipment is and outline spares support requirements for this equipment. After establishing the requirement I will discuss shortcomings in current initial procurement practices and propose remedies which may save the Department time, money and perhaps even some embarrassment.

CAPITAL EQUIPMENT AND SPARES SUPPORT

Capital equipment can be defined as:

- New equipment such as ships, aircraft and armoured vehicles which are additional to or replace items in the Defence Inventory.
- equipment that replaces an existing type with a new type having a significantly different performance; or
- equipment which cannot be construed to be part of maintenance expenditure.[2]

Outlays on major Defence equipment in 1985/86 totalled approximately $1,560m or 24% of the total Defence budget.[3] This figure demonstrates the importance of Defence project management practices. Inefficient or ineffective management has the potential to incur additional outlays for Defence through schedule slippages, cost increases and equipment not meeting requirements. Initial spares support, being 30–40% of the cost of the prime equipment, represents a significant proportion of the Capital Equipment Vote.[4]

Initial spares support must be provided from the parent project's funds. Within Navy, this initial support is defined as:

- one set (per ship/establishment) of 90 day onboard spares; and
- one set of depot spares, sufficient for three years.

The onboard spares are to ensure that ships are supported for their initial deployment with the new equipment. The three year depot spares are provided to ensure adequate support until the Naval Support Command System can ascertain usage rates and implement reprovisioning programmes.

SHORTCOMINGS OF CURRENT INITIAL PROCUREMENT PRACTICES

The problems associated with the current system of initial spares procurement for projects can be categorized into the following six areas:

1. Overspecification

This first problem can occur during project definition, which is an early part of the acquisition process. Overspecification results from an overstated system requirement or the excessive use of military specifications and standards.

Of course, it must be recognized that military equipment must operate in environments not

The Author

John Payne is a graduate of the Royal Australian Naval Staff College and expects to complete his Bachelor of Business Administration Degree in 1987. He currently holds the post of Senior Financial Advisor to the Director General Equipment Projects.

encountered in normal civilian use and that service requirements for reliability exceed those of most industrial applications. However, in many cases, the military specifications under which items are obtained exceed those required for the item to function in its intended role. The excessive use of military specifications can greatly increase the price paid for an item and deliver little extra benefit.

2. Overworked Procurement Authorities

Procurement areas within Defence perform two main functions. They act as procurement agencies and also perform the role of vote co-ordinator. Both functions are time consuming and both suffer from a number of constraints.

The role of vote co-ordinator or project financial adviser revolves around the Government's budgetary system. This system requires input and analysis from vote co-ordinators at set times of the year as well as during ad-hoc reviews. Within the current economic climate, a greater proportion of time is taken up with these reviews leaving less time available to perform other functions.

The procurement activity is also constrained largely by time. Purchasing areas are obliged to work within set implementation schedules. The large number of orders required to be processed by a limited number of staff results in insufficient time being allocated to an examination of each order. While the cost basis of the prime equipment and major sub-assemblies are examined, smaller purchases and the majority of spares are ordered with a minimum of review.

3. Inadequate Competition and Technical Information

These two factors are related in that a lack of adequate technical information can lead to inadequate competition in procurement. Many companies are unwilling to provide the government with drawings detailing how items are manufactured since they consider this to be proprietary data belonging solely to themselves. This practically guarantees that the government has to go back to these companies for resupply in the future.

Inadequate competition can also result from the pressure of time. It takes far less time and effort to place an order with a known supplier than to solicit bids from numerous contractors, evaluate the proposals, and select the lowest bidder in the hope that he can fulfill the contract.

4. Over-Reliance on Prime Contractors

For the purposes of this paper, prime contractor will refer to both a major supplier in a normal commercial buy and the United States Department of Defense (USDoD) when purchasing through Foreign Military Sales (FMS) procedures. Procurement through either can result in similar problems.

Use of a prime contractor involves awarding a contract to a company or agency and paying that company to co-ordinate the work of sub-contractors who actually manufacture the items required. The management costs added by a prime contractor can be significantly higher than the costs incurred if government personnel perform the purchasing and co-ordinating roles. Government employees do not tack on a percentage for profit. Despite the fact that the use of prime contractors simplifies the acquisition of complex ships and equipment, the reliance on this method to provide spares support for such systems is not cost-effective.

5. Uneconomical Order Quantities

The procurement of spares for capital projects is carried out on a project-by-project basis. Each project funds its own set of 90 day onboard and three year support spares. No attempt is made to combine the requirements of two or more projects to determine where commonalities, if any, exist. In many cases, items listed as required spares are common, off-the-shelf items available commercially in Australia but are bought overseas along with the prime equipment.

6. Ill-Defined Requirements

Many capital projects deal with equipment new to Defence and little knowledge is held regarding spares requirements. Therefore, no real attempt is made to properly define the level of spares support required. As a result, contractors supply what they believe are the requirements based on their experiences or calculations. The list of recommended spares may be inadequate or overgenerous, depending on the philosophy or marketing strategy of the firm concerned. This problem is worse when purchasing from overseas as little account is taken of Australia's distance from the source of supply or differing operating conditions.

When the lists of recommended spares are received, they are often accepted at face value. The combination of time and staff constraints result in minimal analysis.

WHAT ARE THE EFFECTS OF THESE SHORTCOMINGS?

The problems outlined above result in:

- inadequate spares support for the ship and/or equipment being procured, and
- waste of financial resources.

The follow-on support for equipment is a reflection of the range and depth of the spares support procured as part of the initial buy. An inadequate spares buy at the outset can contribute significantly to inadequate spares support throughout the life of the equipment.

Financial resources wasted through inefficient spares procurement are resources not available for another purpose within either the project in question or Defence in general. Resources must be allocated in the most efficient and cost-effective manner possible, especially within the current financial climate. To begin to explore solutions to the wastage of defence resources it may be of value to observe the US Department of Defence (DoD) experience in this area.

THE U.S. EXPERIENCE

The USDoD has suffered similar problems in the acquisition of equipment and spares support. Major public attention was focused on this area in 1983 with often sensationalist headlines describing examples of waste within the USDoD. Since this time, the Defence Logistics Agency and the individual services have put in place more than 500 separate procurement reforms.[6]

The problem in the US is seen not merely as a procurement problem but one which encompasses the whole acquisition process. This problem includes how we determine our requirements, the acquisition strategy we use to obtain the items, and finally, the procurement process we use to buy the items.[7]

The problems identified can be categorised as follows:

- Staff Shortages. The annual budget for spares in the US Navy has been growing dramatically since 1981 and in 1984 amounted to $US4 500 million. During this period, staff numbers within procurement areas remained static.[8]
- Lack of Technical Data. Fiscal constraints curtailed the buying of technical data necessary for a proper examination of requirements and alternative source selection.
- Inadequate Competition. Inadequate technical information and an overreliance on prime contractors lowered the level of competitiveness in many purchases.
- Overspecification. Many items were manufactured in small quantities and to stringent military specifications. Both guarantee excessive prices.
- Urgent Requirements. Inadequate planning resulted in 'crisis management' where many items were bought at inflated prices to ensure early delivery.

The USDoD has taken two courses of action to overcome the perceived procurement problems. The first step was to take punitive action against suppliers guilty of overcharging to deter further 'rip-offs'. In the past five years, the USDoD criminal investigative units have opened nearly 40 000 fraud cases, of which the department has referred 17 000 for prosecution or administrative action. Since 1981, more than 1500 defence contractors have been suspended or banned from doing business with the USDoD. A notable example is General Dynamics Corporation who were suspended for a number of months in 1985.[9]

The second course involved instituting internal reforms to enhance productivity. A number of reforms are underway within both the USDoD and the individual service departments. Within the Department of the Navy, Secretary John Lehman has instituted two major reforms, these being 'Buy Our Spares Smart' (BOSS) and 'Specification Evaluation and Reduction' (SPEAR). The following describes the main points of these programmes:

BOSS is composed of over 100 initiatives, the major ones being:

- increased staff; including the creation of the position of Competition Advocate General of the Navy (filled by a Rear-Admiral);
- increased computer support;
- compulsory dual sourcing of major equipments;
- a process known as 'breakout' whereby prime contractors are obliged to supply manufacturing data; and
- establishment of a 'price hot line' whereby users are able to report suspected overpriced parts.

SPEAR is more concerned with the engineering aspects of spares acquisition. It is designed to reduce the use of military specifications to a reasonable level. The intent is to procure materiel and systems which are sophisticated enough to do the job but are not burdened with specifications which add little to the items value, but add greatly to its cost.

Results to date indicate that the management and acquisition reforms implemented are helping to improve the cost-effectiveness of spares procurement. In 1984, the USDoD documented net savings and cost avoidances of $US1200 million against costs to implement the reforms of approximately $US100 million — a benefit to cost ratio of 12:1.[10]

METHODS TO IMPROVE AUSTRALIAN DEFENCE SPARES PROCUREMENT

Possible methods to improve the cost-effectiveness of Australia's Defence spares acquisitions are outlined in the following

paragraphs. Problems and solutions are examined in terms of the six categories discussed earlier.

Overspecification

The solution to this problem demands the co-operation of engineers and technicians to limit the unnecessary application of military specifications to the required systems. A method may be to define mission performance requirements and allow contractors sufficient flexibility to recommend the most effective application of military specifications and standards. At the same time, care would need to be taken to ensure people and equipment are not endangered through the use of inferior parts.

Overworked Procurement Authorities

The current practice of spares procurement is labour intensive. Little use is made of automation and all aspects of acquisition are carried out manually. To overcome current staff shortages, two methods are available. These are:

- increase staff numbers, and
- automate routine activities.

It is only in the area of technical assessment that the argument for additional staff is justified. This type of work is specialist in nature and would be difficult to automate to any great degree. Aside from technical assessment, much of the procurement process is open to automation. The activities of ordering, cross-checking and balance assessment could be carried out as part of an automated process. Automation would allow orders to be processed faster thereby leaving more time for review of requirements.

Inadequate Competition and Technical *Information*

One method of lowering prices for spares is to increase the competition involved. Competition between suppliers forces efficiency and drives the price to the lowest possible level while still

HMAS Success? The AOR Project was described as one of four 'especially unsuccessful' projects by the Joint Parliamentary Committee of Public Accounts. This project ran three years over schedule and $130 million over budget. Is the vessel up to specifications? Is it adequately spared?

Photograph courtesy LSPHOT E. Pitman

allowing the manufacturer to make a fair profit. Competition requires the buyer to be able to identify potential suppliers. To do this, he needs technical information or manufacturing data for the items concerned.

To ensure the availability of this technical information, the supply of data packages should be a criterion when assessing source selection. Less reliance is then placed on the initial supplier for follow-on support. In addition, greater use should be made of automatic data processing to access this information once it is available. There is little point in obtaining data packages if they cannot be properly utilized.

Over-Reliance on Prime Contractors

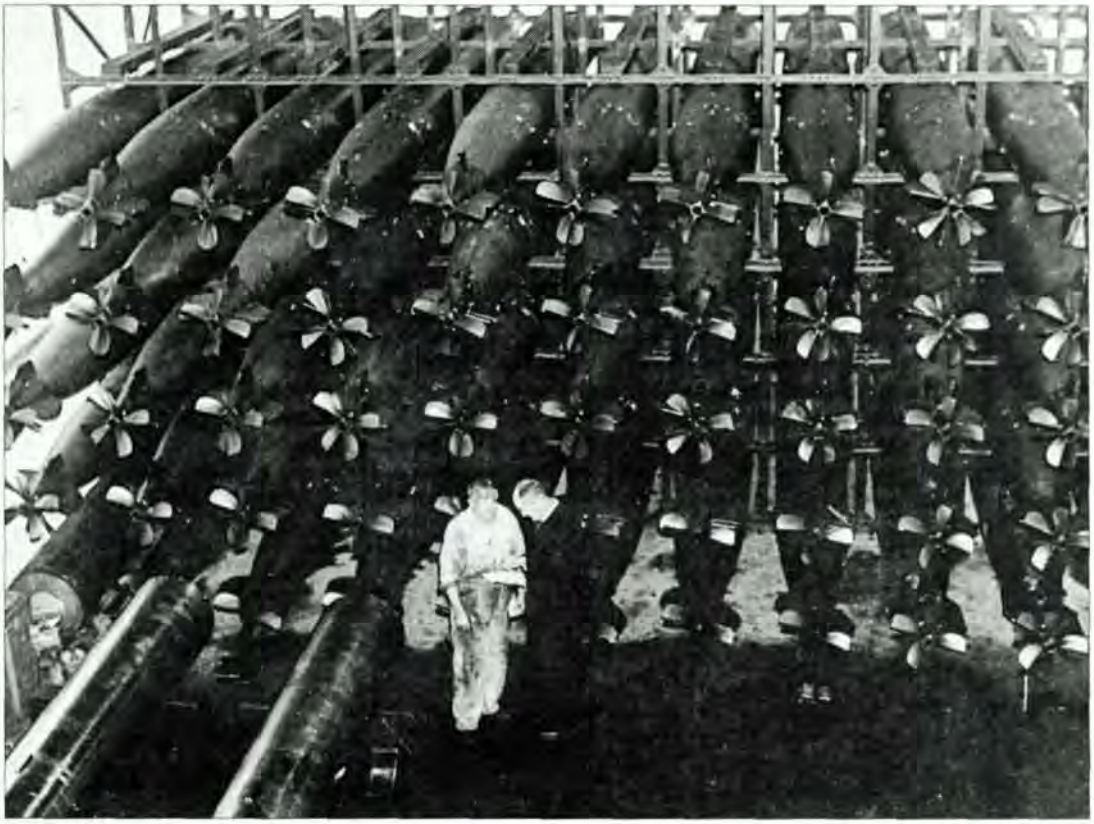
The methods outlined are also applicable in overcoming this problem. The availability of technical information should make the project less reliant on the prime contractor for follow-on support and increase the level of flexibility within the project. When procuring items from the US, less use should be made of FMS procedures. By going directly to the manufacturer, Defence would save the cost of the USDoD administrative charges and, in many cases, would decrease the lead time involved in procurement.

Uneconomical Order Quantities

By the use of automatic data processing and technical information, items common to more than one project may be brought together into a consolidated purchase. Additionally, the three year period of initial support could be extended, increasing the quantity of each item bought. Both methods would result in items being bought in more economical quantities thereby lowering unit costs.

Ill-Defined Requirements

The supplier should be given more information about the specific operating requirements of the item to be supplied. The supplier is then given a



The aim of the procurement process is to ensure the availability of adequate numbers of weapons and platforms for use in combat. Ammunition expenditures in recent wars such as Yom Kippur and the Falklands were phenomenal. Australia's current wartime stocks of ammunition and spares will not last long.

Photograph reproduced from AWM No P444/-/44

better idea of Defence's requirements and is able to determine spares listings accordingly. When received, these lists should be subject to greater scrutiny than is presently the case. This requires more technical staff and more time to carry out the assessment, both discussed above.

IN CONCLUSION

The wastefulness and inefficiency of Department of Defence procurement is not only a matter of public record, it is a matter of public disgrace. This article has specified a number of ways to streamline the procurement process. For example, the procuring of initial spares support for capital projects within Defence can be made more cost-effective. Inadequate staff numbers, a lack of competition and a shortage of technical information all result in Defence wasting scarce financial resources in inefficient spares procurement. Experience from the US of similar problems has shown that these can be overcome to a degree through programmes designed to improve both the initial specification of requirements and the follow-on procurement process.

Defence must improve the through life support of ships and equipment by the cost-effective procurement of spares during the initial acquisition process. Possible means of achieving this are to:

- Define requirements in terms of the mission and allow the contractor to suggest specifications to meet this requirement.
- Increase the number of technical staff available for the assessment of spares requirements.
- Automate routine activities of the procurement process to enable staff to have greater time to evaluate requirements.
- Define the supply of manufacturing information as a criteria in assessing source selection during initial procurement.
- Increase the use of automatic data processing for technical information required for reprocurement.
- Make use of commercial sources rather than FMS when purchasing from the US.
- Consolidate common spares for two or more projects into combined buys.
- Increase the depth of initial spares support from the current three years.
- Give contractors more information concerning the specific operating conditions of equipment in order to aid the determination of spares requirements.

Finally, the setting up of a monumental, centralized organisation such as the Capital Procurement Organisation (CPO) will not solve our problems or save us from future embarrassment or even scandal in terms of procurement waste and inefficiency. A 'common-sense' approach to procurement must be introduced which eliminates the overcautious, cumbersome procedures of the past . . . and present. This article has, I hope, served as an example of such an approach in an important aspect of our much maligned defence procurement process.

NOTES

1. The most recent major indictment of defence procurement and project management was published in 1986 (Joint Committee of Public Accounts. Review of Defence Project Management). Auditor General's Reports are also a rich source of justified criticism.
2. ILS Notes, Scientific Management Associates Pty Ltd, para 5.1.5.
3. Review of Defence Project Management Vol 1, p3.
4. DI(G) ADMIN 05-5.
5. DI(G) ADMIN 05-5.
6. 'Spare Parts Pricing In Perspective' M.N. Schriber *Defense Management Journal*, Fourth Quarter 1985, p66.
7. 'The $436 Hammer' Cdr J.E. Jackson, USN *Proceedings*, December 1985, p66.
8. *ibid*, p66.
9. 'Eight Major Problems With Spares Procurement' D.V. Schaaf *Defense Management Journal*, Fourth Quarter 1985, p37.
10. *ibid*, p34.

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July 1917 '... That Afternoon of Gabo seems unreal, somewhat incredible even to one who was present. The good folk of Sydney and Melbourne would certainly have been startled had they known that a raider was steaming off the coast with her afterdeck black with mines, and waiting for only darkness to set in before mining in Australia's most important sea track.'
Roy Alexander, Australian POW on Board the German Raider WOLF.
(From 'The Cruise of the Raider Wolf,' 1939)

October 1940 '... (Kruder) made a long reach to South and South-East Australia for the sole purpose of laying mines off Sydney, Adelaide and the Southern part of Tasmania.'
Vice Admiral Fredrich Ruge, Senior German Minewarfare Officer in World War Two.
(From 'Seawarfare 1939–1945: A German Viewpoint', 1957)

THE SEAMINE AS 'FIRST STRIKE' WEAPON AGAINST AUSTRALIA — THEN AND NOW

By Lieutenant Commander Alan Hinge, RAN

The mine was used as 'First Strike' weapon against Australia in two world wars. It is *the* threat with successful precedent. Any terrorist or military planner aiming at affecting the independence of Australian government decision making would simply not be doing his homework if he did not consider the mine a logical, low risk option for use against Australians.

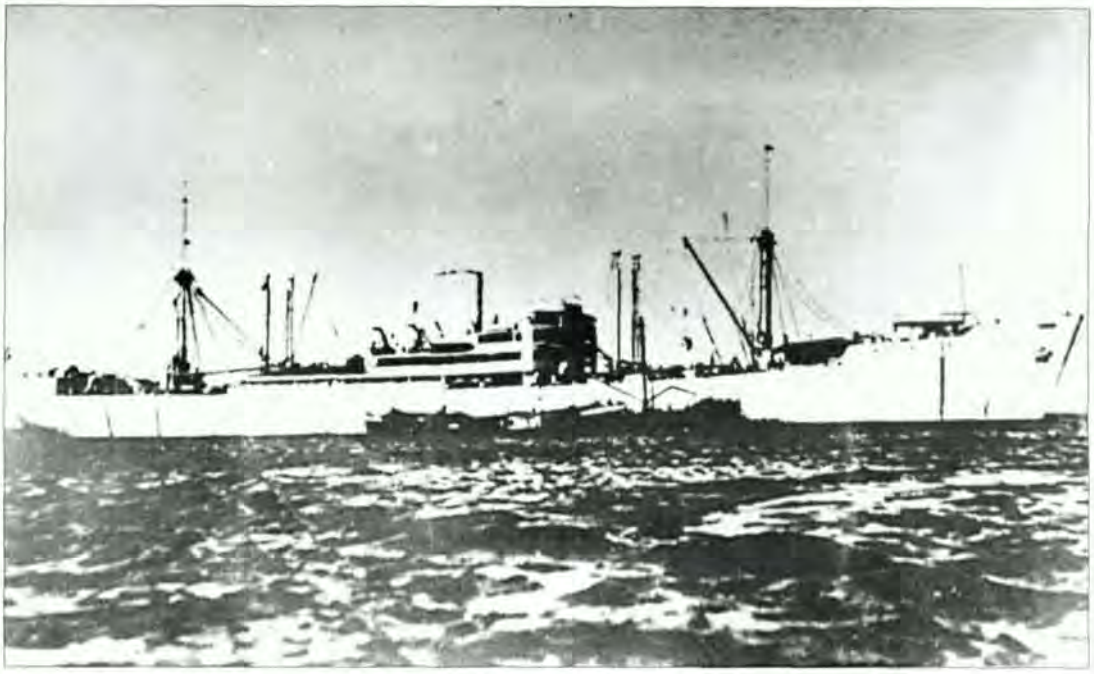
This article examines the mine threat in some detail. We will first explore how the mine was used against us, the damage done and the disproportionate response gained from use by the enemy. Then, it is necessary to honestly ask ourselves if the situation in terms of vulnerability has improved and whether we are taking adequate measures to protect ourselves from the mine menace.

GERMAN OFFENSIVE MINELAYING OPERATIONS IN AUSTRALIAN WATERS

During both World Wars armed German merchant ships, or Auxiliary Cruisers (Raiders), operated for short periods in Australian and New Zealand waters. These vessels inflicted extremely large amounts of damage when compared with the resources invested in their operation and drew a vastly disproportionate response from the Australian Commonwealth. The Raiders were adept in the use of deception and the essentials of what was effectively sea-going guerilla warfare. The use of the mine was an integral part of their operations and each raider was equipped with several hundred mines, with resupply being made as circumstances permitted.[1]

A case in point involved the WWII offensive minelay of the Raider PINGUIN, Ship 33) under the command of Captain Felix Kruder. PINGUIN's principal huinting ground was the Indian Ocean and adjacent Antarctic waters. The Germans were fully aware of the utility of the mine and the vulnerability of Australia to mines. Consequently, in the words of Vice Admiral Friedrich Ruge, — Germany's senior minewarfare officer — '. . . Kruder made a long reach to South and South-East Australia for the sole purpose of laying mines off Sydney, Adelaide and the southern part of Tasmania'.[2] While operating in the Indian Ocean during September 1940, Kruder planned his Australian minelays and decided that two minelays would make the operation much easier. He intended to use his next 'prize' as an Auxiliary minelayer. Two vessels would enhance the security and spread of the operation in view of the large distance between the planned fields which were to be deployed between Newcastle and the Spencer Gulf. Realising that once his mining effort was detected an effort would be made to sweep all significant parts on the coast, Kruder decided to place a two-day activation delay on his moored contact mines so that they would not be detected until all fields were laid.[3]

In early October Kruder captured the Norwegian tanker STORSTAD (8,998 tons) which was heading from the Strait of Sunda towards Australia. STORSTAD was renamed PASSAT and was promptly converted to an auxiliary mine layer east of Christmas Island. PASSAT was to mine Banks Strait and the east and west ends of Bass Strait between Tasmania



A German raider taking on ordnance in Kiel.

Photograph reproduced from AWM No 53867

and the Australian mainland. Under Lieutenant Warning, GNR, PASSAT proceeded south from Christmas Island, around Cape Leeuwin and deployed 120 mines in accordance with this plan.[4]

PINGUIN was to mine areas around Sydney, Newcastle and Hobart since these areas were considered natural focal points for shipping as indeed they still are today. The Raider kept well out to sea until ready for its lay. At midday on October 28th she slowly steamed on a southwest course towards the east Australian coast and had arrived off Port Stephens by 7.33 pm that evening. Conditions for the lay were ideal. The night was cloudy and very dark with coastal lights conveniently operating in accordance with peacetime regulations. This made accurate navigation — so essential to deploying the minefield correctly — possible. Kruder's War Diary, or log, contains the following entries which describe the details of this offensive minelaying operation against Australia. Entries are reproduced here in full to emphasize the ease with which covert minelaying operations have been and indeed still can be prosecuted in Australian waters.[5]

28.10.40

7.33 p.m. Beam from Port Stephens coming in sight 65° to starboard.

7.40 p.m. Sweeping searchlight beam coming in sight over the horizon from direction of Sydney.

7.52 p.m. Three searchlight beams can be made out in the direction of Newcastle, in between them the beam from Newcastle lighthouse. Cross bearings of Newcastle and Port Stephens cannot be taken as the lights still lie below the horizon. Lights are shining in accordance with peacetime regulations.

8.13 p.m. First part of Operation begun, with first mine in 188m of water.

8.27 p.m. Two lights 30° to starboard.

8.30 p.m. Confirmed as lights on shore (Catherine Hill).

8.53 p.m. End of first part of mine laying operations. Last mine laid in 153 m of water.

9.19 p.m. Began second part of Operations. First mine in 140 m of water. The enemy searchlights in Sydney and Newcastle can now be clearly defined. They are located on hills, possibly outside the towns. They sweep for ten minutes every half hour in Sydney, and ceaselessly in Newcastle. They impede a direct approach to the harbour entrances, and render sights possible in spite of entering craft.

9.33 p.m. *End of second part of operation. Last mine laid in 140 m of water.*
9.53 p.m. *Norah Head Lighthouse beam appears.*
10 p.m. *Norah Head dead ahead.*
10.22 p.m. *Began third part of operation. First mine laid in 130 m of water. The position is easily determined. Norah Head Lights on a hill ashore, dead ahead. Catherine Hill, 30° to starboard; Beam from Barrenjoey Head Light (Broken Bay) 30° to port; Sydney searchlights 60° to port.*
10.38 p.m. *Last mine laid in 96 m of water.*
11.30 p.m. *Proceeding at 14 knots to last barrage position.*
11.40 p.m. *Began fourth part of operation. (Sydney approaches) by laying one mine in 140 m of water.*

29.10.40

12.1 a.m. *Finished fourth part of Operation. Last mine laid in 154 m of water. Course 110°, speed 10 knots.*
12.40 a.m. *Withdrew at 10 knots, course 110°.*

Newcastle beams out of sight. Proceeded south at 15 knots to carry out mining operation Two, off Hobart. As up till midnight (29.10.40), nothing has been heard of PASSAT, I presume that she has been able to complete, according to plan, Exercise I, scheduled for today; the fouling of mines of Banks Straits.

30.10.40

12 p.m. *40°20' S., 151° 58'E. Visibility good. Nothing (Noon) to report. Nor has anything been heard of PASSAT today. Consequently Operation Two, the minig of Eastern Entrance to Banks Strait has presumably been carried out.*

31.10.40 *(At noon en route for Hobart, PINGUIN reached position 44° 19'S., 147° 59'E. The weather had deteriorated, with misty rain and poor visibility. At 3.44 p.m. the look out sighted Eddystone Rock on the starboard bow. The raider approached to a position 15 sea miles from the entrance to D'Entrecasteaux Channel). Kruder comments:-*

5.5 p.m. *"Sky suddenly clears, rain ceases, and the snow capped coastal range of Tasmania, 1000 m high, comes in sight on the starboard bow. Turned away and withdrew. Turned again to course 335° before darkness falls and steered towards both cliffs. Approach slowly."*
7. p.m. *Action Stations. Cape Bruny Lighthouse in sight 40° to starboard.*
7.37 p.m. *Piedra Blanca 2.5 sea miles off the starboard beam. It has completely cleared up and the night becomes starlit, the western horizon can be clearly seen.*
8 p.m. *Cape Bruny dead ahead.*
8.7 p.m. *Searchlight beam in sight 09° over the horizon, sweeping to and fro.*
8.21 p.m. *Glow from searchlight on 24° apparently searchlights on both sides of D'Entrecasteaux Channel, situated on a narrows behind Bruny Island.*
8.47 p.m. *Clouding over. Increased speed to 13 knots and then to 15 knots.*
9 p.m. *The ship has now approached the D'Entrecasteaux Channel entrance sufficiently to sum up the position. Six sea miles off the port beam, the coastal range, 300 m high, curves around into the distance far ahead. Dead ahead lies the Entrance and on the starboard bow Bruny Island.*
9.18 p.m. *Patrol vessel D/F'4, true bearing, 030°, apparently in Storm Bay.*
9.20 p.m. *First part of Operation begun. First mine laid in 100 m of water.*
9.33 p.m. *End of first part of mining Operation. Proceeded into Storm Bay at 16 knots.*
9.53 p.m. *Tasman Head 5 sea miles off the port beam.*
10.29 p.m. *Turned to minelaying course 046° for the second barrage. Two searchlights can now be seen on 360° apparently right in Hobart entrance.*
10.35 p.m. *Lights on shore come in sight.*
1 p.m. *First mine of second operation laid in 113 m of water.*

1.11.40

12 a.m. *Last mine laid in 137 m of water.*
Position *End of operation. The coastline of Tasmania lis six 14° 40'S. miles off the port quarter.16° 42'E. Raining. No message from PASSAT consequently she must have completed Operation Three in the Western Entrance to Bass Strait.*

The German operation was conducted without a problem for the Raider and its Auxiliary. One week after this rather casual, three-day minelaying operation had been completed, the British Freighter CAMBRIDGE (10,846 tons) was mined and sunk 6 miles east of Wilson's Promentory, Victoria. Two days after this, on 9 November, the US Merchant ship CITY OF RAYVILLE (6,000 tons) was mined six miles south of Cape Otway in southern Victoria, earning the dubious distinction of being the first US ship sunk in World War II.[6]

In early December the British Merchantman NIMBIN (1,050 tons) was sunk and the British Freighter HERTFORD (10,923 tons) was severely damaged off Norah Head, NSW and Liguanea Island, SA respectively. Even with the intensive effort of the Australian 20th Minesweeping Flotilla, coastal shipping was disrupted until the end of the year. The threat persisted into 1941 with the trawler MILLIMUMUL being sunk off Barrenjoey Head, NSW in late March of that year.[7]

The official deathroll as a result of this German offensive minelay was sixteen together with a large number of injured allied personnel. Besides the direct destruction of over 18,000 tones of shipping and serious damage to a large freighter at the cost of only 230 simple, moored contact mines the indirect results in terms of disproportionate response were huge. Coastal shipping was thrown into confusion, ports were completely closed and shipping did not return to normal for many weeks after each sinking. Vigorous minesweeping efforts were instituted which were to last not for weeks or months but years. The disproportionate response made by Australia as a result of the German operations will be discussed in more detail below.

In mid-November 1940 the crews of the Raider and its Auxiliary were commended by the German Naval High Command for the '... planning, preparation and execution of an exemplary operation' in Australian waters.[8] Shortly after PINGUIN rendezvoused with PASSAT (15 Nov 1940) Grand Admiral Raeder, Cin C of the German Navy awarded five Iron crosses (First class) and fifty Iron crosses (Second class) to crew members.[9]

NO! These survivors are not in Atlantic or Northern Pacific waters. They are the crew of SS Cambridge which was mined off Wilson's Promontory.

Photograph reproduced from AWM No 41276

Auxiliary Minesweeper Orara sweeping a German mine off Wilson's Promontory.
Photograph reproduced from AWM No 3948/21

OTHER GERMAN OPERATIONS IN AUSTRALIAN WATERS IN WWII

PINGUIN and PASSAT's Australian minelay was certainly the most rewarding (from a German point of view!) minelay in Australasian waters, but it was by no means an isolated effort. German naval authorities were resolved that materials destined for Britain from Australia and other Commonwealth nations should be intercepted. Mines were seen as an ideal means of doing this when co-ordinated with direct raider interdiction operations.

In September 1940 the Raider ORION (Auxiliary Cruiser 36) was active off the coast of Western Australia and was drawing a disproportionate response from minesweeping units and Commonwealth authorities. Earlier that year, in June, Orion had been in the Gulf of Hauraki mining the approaches to Auckland. NZ. At that time ORION laid all of the 228 combat mines in its hold and one week after deployment, success was forthcoming. The large Mail steamer NIAGARA (13,450 tons), containing two million pounds worth of gold bullion and over one half of New Zealand's stock of wartime small arms ammunition, was mined and sunk. Soon after this costly loss occured the freighter PORT BOWEN was also sunk in the minefield and efforts to sweep the field resulted in the loss of the RNZN minesweeper PURIRI. The Commanding Officer of Orion (Commander Kurt Weyher) was so pleased with his New Zealand success that he ordered the manufacture of a small number of dummy mines while at sea and deployed them off Albany, WA, so as to capitalize on the confusion and fear spread by the New Zealand sinkings.[10]

New Zealand was also mined by the German Auxiliary minelayer ADJUTANT off Port Lyttleton and Wellington. The magnetic mines employed were either faulty or laid in water which was too deep. Had they been deployed properly, in the right numbers and at the right depth, New Zealanders would have been confronted with a far more demanding MCM problem than the sweeping of simple, moored contact mines.[11]

Australians too were arguably fortunate to escape the offensive use of magnetic mines. In 1941 the Raider KORMORAN (Ship 41) was directed to mine Australian waters using magnetic mines. Captain Theodor Detmers, the youngest of the Raider Captains, was planning to mine the approaches to Geraldton and Carnarvon but had decided against it on the ground that traffic in and out of these ports was insufficient to warrant a minelay. The division of the German Naval High Command that oversaw

Raider operations (the SKL) 'deplored this decision'. Finally Detmers chose to initiate his offensive minelay off Perth and was on his way to this objective when KORMORAN met, sank and was sunk by the Australian cruiser HMAS SYDNEY on the evening of 19th November 1941. SYDNEY'S entire ships company, numbering 675 men, was lost as a result of this action. Most of the Raiders crew survived.[12]

WWI OFFENSIVE MINELAYING IN AUSTRALIAN WATERS

The use of the mine against Australia in World War II should not have come as a surprise to Australian authorities. Afterall, the mine used as a 'first strike' weapon against Australia in World War I also.

The Raider WOLF introduced the mine to Australian and New Zealand waters. In June 1917 WOLF, during its piratic circumnavigation of the world, laid a small field or moored contact mines off Cape Farewell, New Zealand. In August the large cargo vessel PORT KEMBLE (5,000 tons) was sunk. New Zealand Naval authorities initially thought that a bomb had been placed on board by a disgruntled Australian dockworker and believed mines were not responsible for the sinking. However, mines were ultimately shown to be responsible when they claimed another victim. The Passenger Steamer WIMMERA (3,500 tons) was mined and sunk between North Cape and the Three Kings, NZ, in July 1918. Twenty-six lives were lost. New Zealand authorities were now pressed into decisive action and requested assistance from Britain and the US. These requests were dismissed out of hand as war materials and assets were said to be needed in much more pressing Theatres. At this point, being thrown on their own resources, the New Zealanders mustered an 'ad hoc' sweeping squadron consisting of two fishing trawlers and a whaler. These succeeded in sweeping WOLF's remaining simple moored mines.[13]

Unfortunately, Australia was not to escape the attention of WOLF since the raider lost no time in making for the Australian coast once its New Zealand fields were laid. A small field of 25 mines was laid 10 miles off Gabo Island lighthouse on 3 July 1917. Mr Roy Alexander, an

The enemy — Captain Theodor Detmers, Commanding Officer of Kormoran.
Photograph reproduced from AWM No 53869

The advanced SONAR concept

Integrated Sonar Systems

for Submarines

for Surface-Ships

for Mine Counter Measure Systems

KRUPP ATLAS ELEKTRONIK

Australian prisoner of war, who was on board WOLF at the time stated in his memoirs:

> 'That afternoon off Gabo seems unreal, somewhat incredible even to one who was present. The good folk of Sydney and Melbourne would certainly have been startled had they known that a raider was steaming of the coast with her afterdeck black with mines, and waiting only for darkness to set in before mining Australia's most important sea track.[14]

Three days later the new Steamer CUMBERLAND (15,000 tons) encountered the Gabo field just before midnight on 6 July and the master signalled that he was mined and sinking. However, he did manage to beach his ship on the island and on the following morning the vessel was examined by naval and government experts. The 'experts' concluded that — despite the obvious sight of ships plates torn inwards — CUMBERLAND had been the victim of an internal explosion![15]

Government proclamations offered a substantial reward for information leading to the conviction of persons who had '... feloniously and maliciously destroyed the CUMBERLAND.'[16] According to Alexander such ridiculous proclamations '... caused much amusement when they were reprinted in German newpapers months later.'[17] No efforts were made by the Australian government to declare hazardous areas or divert shipping. But evidence was mounting the minefields were laid. The modern collier UNDOLA disappeared with all hands. Several smaller vessels disappeared without trace. Finally, mines were washed ashore at Bega and Newcastle and 'floaters' were sighted around Gabo island.[18]

Mr Alexander, who wrote a book on the WOLF's wartime activities, does not disguise his contempt for the crassness and incompetence of the Australian government's MCM efforts at the time. He comments:

> 'According to the British War History, mines in Australasian waters were "dealt with by the Australian and New Zealand naval forces." This phrase "dealt with" is tactful and correct, for there is little record of any minesweeping on those coasts. Most of WOLF's mines appear to have been "dealt with" by their cables rusting through and the mines exploding harmlessly on the beaches; others were destroyed by gunfire when they were reported ... Seen from all angles, the Tasman Sea activities of the WOLF revealed hopeless incapacity on the part of the Australian administrators — an incapacity so hopeless it remains almost incredible.'[19]

It was not until mid-October 1917 — four months after the sinking of CUMBERLAND — that the Australian government acted to form a minesweeping squadron and commence sweeping operations off Gabo Island.

The enemy — Captain Karl August Nerger, Commanding Officer of Wolf — an outstanding seaman.

Photograph reproduced from AWM No H13504

THE AUSTRALIAN DISPROPORTIONATE RESPONSE (WWII)

As a result of the German minelaying offensive in Australian waters during WWII, Australians were called upon to make a disproprotionate response of a very high level.

The AMS (Australian minesweeper) was oin the drawing boards prior to the outbreak of hostilities in WWII and by December 1939 four of these vessels were laid down with a modest number of follow on vessels planned. The AMS, with a displacement of 650 tons and length of 186 feet, was later known as the Bathurst Class Fleet minesweeper or Corvette. However, the Naval Board was faced with a minesweeping gap which would exist until sufficient AMS were operational so, in early September 1939 the Board set about acquiring the core of an auxiliary minesweeping flotilla to provide some initial defence to the east coast ports of Brisbane and Sydney. On September 3rd 1939 the merchant ship DOOMBA was taken up from trade for conversion to a minesweeping role for the protection of Brisbane. At the same time the merchant ships GOOLGWAI and TONGKOL were taken up for conversion and given the task of protecting Sydney. By the end of the month a further five ships; the ORARA, BERYL II, GOORANGAI, OLIVE CAM and KOROWA were undergoing conversion. The sloops SWAN and YARRA were next to be converted to a minesweeping role. In mid-November 1939 the formation of Australia's first minesweeping flotilla (the 20th) occurred, with a core force consisting of SWAN, YARRA, ORARA and DOOMBA. The Bathursts BURNIE, GOLBURN, and the sloop WARREGO (Flotilla leader) jointed the Flotilla in 1940.[20]

By mid 1940, at the time of the mining of NIAGARA off Auckland, swept channels were being maintained in the approaches to Sydney harbour by 12 minesweepers in five groups.[21] These sweepers had also to support any minesweeping requirements of other east coast ports which were only very lightly defended against mines by the odd converted sloop or mechantman. Sydney was at that time the only Australian port with an effective means of protecting itself from a mine attack and even then only against conventional moored mines.

After the sinking of CAMBRIDGE off Wilson's Promontory on 7th November the 20th Flotilla was alerted and arrived in the area on the 9th only to receive the news that CITY OF RAYVILLE had sunk some 150 miles to the west. After two days intensive sweeping by the whole flotilla only five mines had been recovered from the two then known fields.[22]

Bass Strait was at this stage closed to all shipping and all traffic to and from Port Phillip Bay was suspended. It was a full week before vessels were allowed to leave port. A few hours after the sinking of CITY OF RAYVILLE the Prime Minister, Mr Menzies, stated that:

> '... for 12 months many Australians have regarded the war as somewhat remote. These disasters on our shores have brought the war very near.'[23]

Shortly after the sinking the Government was widely criticized for doing nothing to reduce the apparent ease of enemy minelaying operations and providing '... totally inadequate protection of coastal shipping against enemy attack.'[24]

The situation did not get easier for the government in early December when the Minister for the Navy (Mr Hughes) stated that all vessels plying the coast were to be provided with paravanes — bow floats used to divert mines from ships — for mine protection because'... it appeared that the coast of Australia was widely mined.'[24] The port of Newcastle was closed for almost a week and partial restrictions were placed on Sydney shipping traffic. St Vincents Gulf, Spencer Gulf, the Backstairs Passage and sections of Bass Strait were closed to traffic. It was at this point that Menzies considered holding a Secret Session of Parliament to discuss the mining of Australian ships and Australian coasts.[25]

By the end of December, after sustained operations, only 20 mines had been swept of a (then unknown) total of some 200 mines which constituted the two Bass Strait fields and the other German deployed offensive minefields 'discovered' by NIMBIN on December 5th and HERTFORD in the Spencer Gulf two days later.[27] The Banks Strait field was not discovered by any passing ship and its existence was only found when searching German records after the war.

Bass Strait proved to be a particularly bad place to sweep for mines due to extremely rough conditions making accurate navigation and the marking of swept channels very difficult. Also, due to strong currents, the mooring anchors of the mines often 'crept' along the seabed causing dislocation of most of the field after a few weeks. The threat and thus the minesweeping job was broadened. An added complication was that in such strong currents mines tend to break from their moorings after a few months or even weeks. It was believed that by February 1941, barely four months after deployment, the majority of German mines had become 'Floaters'. Such mines were observed in the Bass Strait area in mid-November, only a few weeks after deployment.[26]

The Australian sweepers 'were under great strain hurrying from one trouble spot to another over great distances'.[29] They had no indication of exactly how many fields had been laid and by March 1941 five mining incidents, involving four sinkings, had taken place in five different locations along a 1,300 nautical mile front. The German plan of widespread seeding over a long stretch of coast seemed to have paid off well. The Australian sweepers were engaged in continual sweeping operations between Newcastle and the Spencer Gulf for 14 months after the voyage of the PINGUIN and the 20th Minesweeping Flotilla, did not conclude regular operations against the German fields until the end of 1941. Years after the initial lay the areas of the old minefields were still being occasionally swept for mines which had crept and it was the Auxiliary sweeper ORARA which cut the last mine in the vicinity of the Cape Otway field on 22nd July 1942. Of course, it was not known at the time that this was the last mine to be cut and operations continued.[30]

Largely as a result of the damage done by the offensive minelays of PINGUIN, PASSAT and ORION the Commonwealth manufactured far more Corvettes that it had originally intended for its own use. Australia produced four flotillas (36) of Bathurst Class sweepers for her own use and 24 units for use by her British and Indian allies.[31] A further 26 civilian vessels were requisitioned from merchant use for conversion to the minesweeping role. From the twelve sweepers forming the core of the Australian mine defence in Sydney in June 1940 the disproportionate response to enemy mining was such that this number was 'rapidly increased to 70 ships operating from six ports around Australia'.[32] Obviously, for a thinly populated country the size of Australia this represented a significant concentration of effort and resources which is all the more surprising if it is realized that the cost of the 230 German moored mines used in the minelay was less than one half the cost of a single Bathurst Class sweeper. The disproportionate response made by the Australian government in terms of capital, crew and administrative costs throughout the war was thus clearly in the order of hundreds of times the cost of the minelaying operation, even if the costs of the cargoes of sunken vessels and the mined vessels themselves are neglected.

Scran on board HMAS Orara during minesweeping operations in Bass Strait — December 1940.

Photograph reproduced from AWM No 3994

THE SITUATION TODAY

If anything the minecountermeasures equation, in terms of disproportionate response, has further benefited the mine during the postwar years. The costs of effective minecountermeasures vessels has risen astronomically over the years and will no doubt continued to do so. In mid 1984 mines were laid in the Red sea approaches to the Suez canal and a very costly international effort was instituted to counter the threat.[33] The use of 18 minecountermeasure vessels and 8 large helicopters with support craft from six different nations were on station for many weeks to sweep and minehunt in the area. The US alone deployed three MCM vessels, eight helicopters and over 1,500 personnel. Numerous minelike objects were detected and had to be investigated while only one recently laid mine was recovered. The Italian MCM contingent logged over 480 minelike objects, all of which turned out to be innocent. The Dutch MCM vessels crews were staggered at the 'trremendous amount of junk' which was scattered on the seabed.[34] Debris included refrigerators, parts of old shipwrecks, oil drums, aircraft parts, wire, toilets and numerous other human artifacts. An average of over 20 minelike contacts per day needed classification which involved time consuming identification procedures by divers and remotely operated vehicles (ROVs). It was said that the British minehunters had to classify, on average, 15 minelike objects per four square miles of seabed. The total cost of the clearing operation is unknown but in view of the difficulties involved, the time taken and the strength of the countermeasure force, the cost of the countermeasures operation would clearly be many times that of the actual mining operation.[35]

During the Vietnam war the mining of three major North Vietnamese harbours and many miles of coastline took place in enemy waters defended by sophisticated anti-air defences which resulted in the loss of a 3 million dollar aircraft. Consequently, mine cost (6.5 million) and aircraft loss amounted to 9.5 million dollars as the total cost of this very effective operation. A comparison can be made with the mine countermeasures cost which, neglecting the normal running cost over six months of the 16 ship MCM task force, cost 20 million dollars.[36] At first glance this may not seem to be vastly disproportionate response. However, certain conditions made the MCM task quite unique and relatively easy. First, practically all the mines had been pre-set to self destruct or sterilize after a period ranging from 3 to 6 monihs.[37] Also, the Americans were countering their own mines in known minefield locations in temporarily non-hostile waters. They were effectively engaged in exploratory sweeping which involved little risk. The North Vietnamese provided the Americans with substantial help as the Northerners had made quite accurate maps of many US minefields. Rear Admiral Brian McCauley, USN, who was Commander Task Force 78 (CTF 78) during the sweeping of North Vietnamese coasts and ports (Operation Endsweep) said:

> '... End Sweep was a unique solution to a unique problem and did not present a challenge of nearly the magnitude that can be expected in the future. The location, type and settings of all mines was known .... Additionally Operation End Sweep was the highest priority in the Pacific Fleet. It commenced with the ceasefire and, as a result, people, ships and aircraft, which in a wartime scenario would have been otherwise occupied, were made available. The objective of the sweeping was largely accomplished prior to laying mines when the self-destruct time was set into the fuze. ... Even with the "co-operation" of the DRV (Democratic Republic of Vietnam) and knowledge of types, location, settings and expiration dates of mines we were compelled to devote a large force and exercise great caution to ensure that the seas and ports were clear. Without this information the task would have been Infinitely more difficult'.[38]

Thus, the disproportionate response drawn by the mine is clearly evident if, even under absolutely ideal MCM conditions and highest priority status, a major US Task Force took six months to clear its own mines from fairly accurately known locations.

Given the much higher levels of effectiveness of modern mines, as opposed to the relatively simple types used in World War Two and Vietnam, the MCM problem becomes increasingly difficult and expensive to solve. Many new mines are all but impossible to sweep which has led to the development and proliferation of mine hunters as solutions to the 'smart' mine. The value and higher damage sensitivity of target vessels has also greatly increased in relation to the cost of modern mines. All in all the disproportionate response drawn by the mine remains extremely large and this state of affairs seems bound to continue.

ECONOMIC VULNERABILITY

The standard of living of Australians is largely dependent on a national ability to export and import large quantities of materials. Over two thirds of Australian imports are from the US, Japan and the EEC, 60 percent of these goods being critical requirements of Australia's

industrial base.[39] These items include machinery, petroleum products, transport equipment and chemicals not manufactured in Australia. In fact, Australia is particularly effected by a 'great dependency on increasingly more complex, manufactured equipment from overseas'.[40] Continued access to world markets is obviously a vital national interest given that 'the Australian economy is closely integrated with the rest of the world — an integration which has been fostered and intensified in recent years by the emphasis in Australian policies on letting the world market forces direct the economy'.[41] Authoritative commentators have even gone so far as to suggest that 'there is now no autonomous national economy in any comprehensive sense, but an economy composed predominantly of aspects of world economy located in Australia'.[42]

Australia's economy is indeed critically dependent on access to world markets and the fact to be faced is that there exists an increasing vulnerability of market economies to the disruption of international trade.[43] If such trade is threatened, stopped or constricted, Australians will not only suffer in the short term but also in the long term since competitiveness and participation in world trade could be substantially damaged. The detrimental effects on economic growth, which can only be sustained by competitive participation in world trade, would clearly have serious repercussions on all levels of Australian society.

Thirty eight Australian ports are normally involved in the import and export of goods with about one dozen of these figuring prominently as relatively high volume commercial ports.[44] These harbours are scattered over the vast extent of Australia's 12,500 mile coastline with harbour approach seabeds being 'very suitable for the conduct of mining operations'.[45] Approaches are often quite narrow and shallow. The west coast has huge areas of muddy bottom into which ground mines can sink and make the minehunting task much more complicated while the mines themselves remain fully operational. As discussed earlier, shallow waters between Newcastle, Sydney and Melbourne are suitable for mining and have been successful hunting grounds in the past for interception of the large amounts of shipping skirting the coast and passing focal areas near major ports. Also, the northern coastal regions have large stretches of relatively shallow, mineable seas through which much shipping passes.

Taking as an example Port Hedland, we first note its importance to Newcastle and Wollongong smelters as the major suppliers of iron ore — an economically and strategically very valuable resource. Access to Port Hedland is gained through the Hedland tidal races via a shallow, narrow channel some 10 miles long. The sinking of an ore carrying ship could completely block this port for many months. Such an incident would practically halve Australian steel making capacity at one stroke using the simplest of mines requiring only command (remote) detonation from shore.[46] A similar wound could be inflicted upon the Aluminium industry with equal ease. Bauxite is conveyed from Weipa to Gladstone around Cape York by four 100,000 tonne ore carriers. These vessels are particularly vulnerable through the shallow channel into Gladstone and the loss of any of these vessels would seriously hamstring national aluminium and alumina production.[47]

Hundreds of vessels plying the several thousands of miles of Australian coastal shipping routes every year, and international shipping at areas around major ports, are quite clearly vulnerable to interdiction by relatively small numbers of mines. The small number of mines used in the Cape Otway and and Wilsons Promontory fields during WWII are cases in point. (See figures 1 and 2.)

Many of the straits and seas through which Australian trade transits, especially to and from our major trading partner Japan, are quite suitable for minelaying operations prosecuted by parties aiming to harass the Australian government or inflict damage using a strategy of economic coercion. The problem is further complicated by the fact that more than one half of Australia's trade is carried in ships bottoms not under the Australian or Japanese flag. The economic interests of these nations would not be vitally affected if they were to suspend trade with Australia because of the mine threat. Recent events in the Red Sea, other middle eastern waters and Central America have destroyed the widely held belief that neutral shipping will not be subject to mine or missile attack and those vessels and crews prepared to risk dealing with an Australia under serious mine threat would expect to be paid for the added risk. Obviously, if a sustained mining campaign were launched against Australia very few neutral ships would take the risk unless some sort of demonstrable countermeasures protection was forthcoming.

Australians are not only vulnerable to the mine threat because of their coastline's sheer geographic exposure the highly dependent nature of their economy. Lack of MCM capability, relative to the area to be defended, is another consideration. Rear Admiral McCauley noted, while flying over Haiphong at the beginning of ENDSWEEP clearance operations, that:

> 'It was an impressive sight on flying over Haiphong in the early days of End Sweep to

see all 26 ships at anchor behind the minefield. None had moved since May when the first mines were dropped.... The effectiveness of the campaign demonstrates once again the vulnerability of a country which has little or no mine sweeping capability to mining. The North Vietnamese ocean shipping was paralyzed until we arrived with the technical knowledge to clear their main channels'.[48]

With one operational MCM vessel in the Australian fleet between 1983 and 1987 Australian defence against the mine threat has been at a post-war low. The over thirty year old Ton class minehunter-sweeper HMAS CURLEW had been kept in service so as to fill the countermeasures gap until the Australian Minehunter Catamaran Inshore (MHI) completes its trials and evaluation programme in late 1987. The MHI, which will only be produced in small numbers (4–6), will provide a capability to counter the most dangerous mine threat which is that posed by the large bottom mine deployed in shallow water. As its name implies, the MHI operates in relatively sheltered inshore waters and can only operate effectively in certain mild seastates. It should be a highly capable vessel for doing its designated job but can only counter threats in a limited band of the mine threat spectrum. Vessels are required which can operate in deeper water under harsher seastate conditions.

It is clear that for the remainder of the decade at least, Australians will remain uncomfortably vulnerable to the mine menace because of the basic lack of MCM platforms in relation to the sheer geographic susceptability of coastal shipping lanes, port approaches and various other focal points.

MILITARY VULNERABILITY

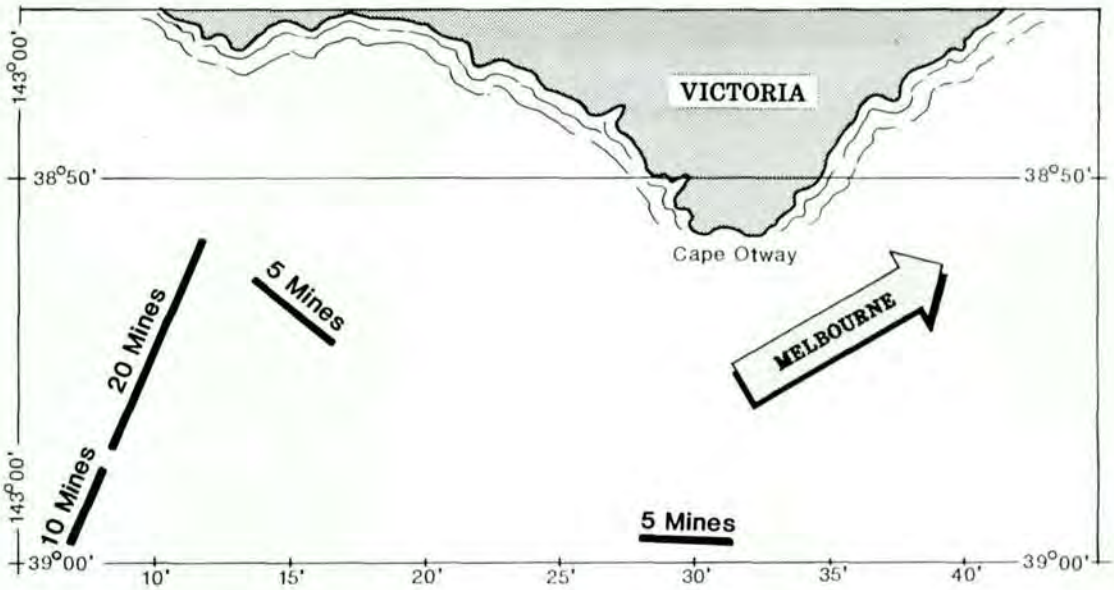
Besides the sparse MCM resources available to Australian planners in the foreseable future, vulnerability to mines also arises from precedent. Mining operations perpetrated by very small elements of hostile forces using the simplest of mines in strictly limited quantities have, as we have seen, met with inordinate success. It would be a serious and irresponsible oversight for the military planners of any hostile nation, desirous of bringing an Australian government to heel, not to consider the use of the mine in attaining certain politcal objectives. As noted, Australia is especially vulnerable to a strategy of harassment employed by those who may one day wish to inflict economic damage, challenge sovereignty or generally restrict the freedom of the Australian government to implement an independent policy.

The ability to use its armed forces to maintain sovereignty, support friends, patrol areas of interest and generally signal firm government resolve is an essential ingredient of national power.[49] Not being able to expeditiously deploy a force capable of visibly upholding Australian sovereignty and resolve would be a serious blow to national prestige, credibility and confidence. A covert offensive minelaying effort against the major Australian port and Fleet Base at Sydney, for instance, in a non-alerted situation could seriously affect the capacity of the Australian fleet to regain the initiative and delploy to a troublespot where its timely presence could be decisive. At any given time, in a situation involving an element of surprise, perhaps half of the Australian Fleets major units including surface combatants and submarienes could be in harbour undergoing refit, repairs or routine maintenance periods. During the Christmas/New Year period an even higher proportion would be in harbour. If Sydney were bottled up for only a few days the ability of the fleet to promptly and effectively respond to hostile actions would be seriousiy compromised.

The seabed in and around Sydney Heads is quite suitable for the deployment of a large variety of mines which can be deployed by covert submarine and surface means. Most conventional submarines are capable of deploying 30–40 bottom mines. Mines can also be covertly laid by almost any surface vessel coming in and out of port. Many mines can be constructed to look like 44 gallon drums and simply thrown overboard at night on entry to a harbour or in harbour approaches by ships legitimately entering port. These mines become part of the enormous amount of debris in harbour approaches and become practically undetectable. A one week arming delay could ensure that the layer had time to berth, do his business and sail out of port in time to escape danger. Bottom mines have even been laid by civilian speedboats in port approaches in recent years.[50]

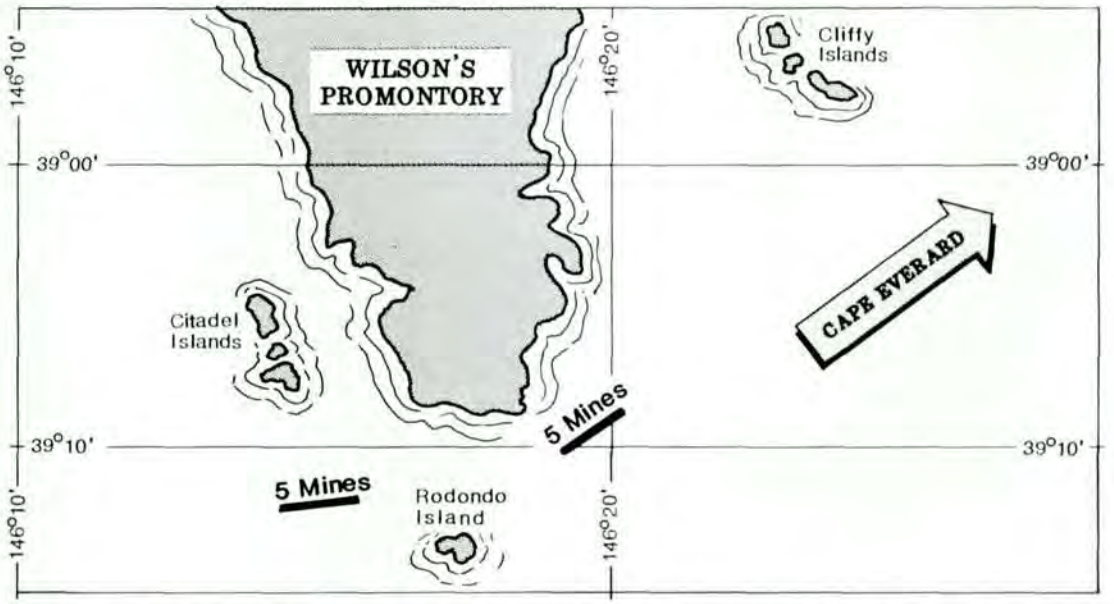
Modern warships contain numerous sophisticated electrical and electronic systems which are highly susceptible to the vibration and shock damage derived from an underwater explosion. An explosion causing only minimal injury to personnel and negligible structural damage could quite easily degrade sophisticated command and control electronics systems to the point where the vessel was not operational and required expensive and time consuming repairs. Modern mines can be set to be very selective of targets and hostile intent may simply be to deter Australian warships from leaving port so that limited operations could be carried out elsewhere on the mainland, in the EEZ or in

FIGURE 1 — THE CAPE OTWAY FIELD



This field sank the freighter Cambridge (10,486 tons) — 7 October 1940.

FIGURE 2 — THE WILSON'S PROMONTORY FIELD



This field sank the first US vessel sunk in World War 2, City of Rayville (5000 tons) — 9 October 1940.

Figures provided courtesy Tony Treadwell

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other areas of Australian interest. If this objective were achieved the security of hostile operations would be enhanced by the lack of forward deployment of Australian units and the Australian government would doubtless be embarrassed in not being able to respond to a situation with all available and appropriate resources.

WHAT ARE WE DOING ABOUT MCM TODAY?

In 1985–86 news of 'breakthroughs' and innovations in RAN MCM capability appeared in the press.[51] One of the breakthroughs claimed by the RAN was the development of the so called SUPERMOP or Buoyant Vehicle Dyad (BVD). If the truth be known the SUPERMOP (see figure 3) is only a marginal improvement on the MOP (Magnetized Orange Pipe) which has been used by the USN with very limited success for decades. The original MOP concept, as developed by the Americans, involved towing a magnetized pipe which significantly increased the magnetic flux density of a small area of ocean. This would hopefully cause magnetic mines to detonate. However, the American MOP gradually lost its field strength under tow and return to base support areas for remagnetization was required. The SUPERMOP is an improvement on the MOP in terms of permanency and perhaps manoeuverability but not much more than this.

Just how effective is the new RAN 'breakthrough' in defending against modern mine attacks? The MOP influence sweeping technology was widely used by US MCM forces during the sweeping of the North Vietnamese coast in 1972–73. In 1975 Lieutenant Commander J. McCoy USN, Minewarfare Officer for Commander Mobile MCM Command during Operation Endsweep, said:

> '. . . We continue to perpetuate the myth that our mine counter measures forces are capable of clearing a minefield in a timely manner. They are not. Even at full strength they are not. And the miners will remain several steps ahead of the mined as long as we continue to be oriented toward fooling the mine into detonating on a phoney signal . . . If the approximately 11,000 US mines planted in North Vietnam had not had sterilization and self destruct features, and if they had contained batteries of indefinite active life, then the completion of that operation (Endsweep) would have been measured in years rather than months. Hundreds of passes over each mine field would have been required. Equipment and personnel casulaties probably would have been high'.[52]

McCoy formulated all detailed minesweeping instructions for airborne (helicopter) and surface units and was the main US technical adviser during negotiations with the North Vietnamese. Realising the dubious effectiveness of influence sweeping methods against modern mines (even of relatively simple types such as US DST-36 mines) he concluded:

> . . . Following exhaustive (influence) sweep efforts, an area could easily be evaluated as

FIGURE 3 — RANRL DYAD MAGNET 'SUPERMOP'

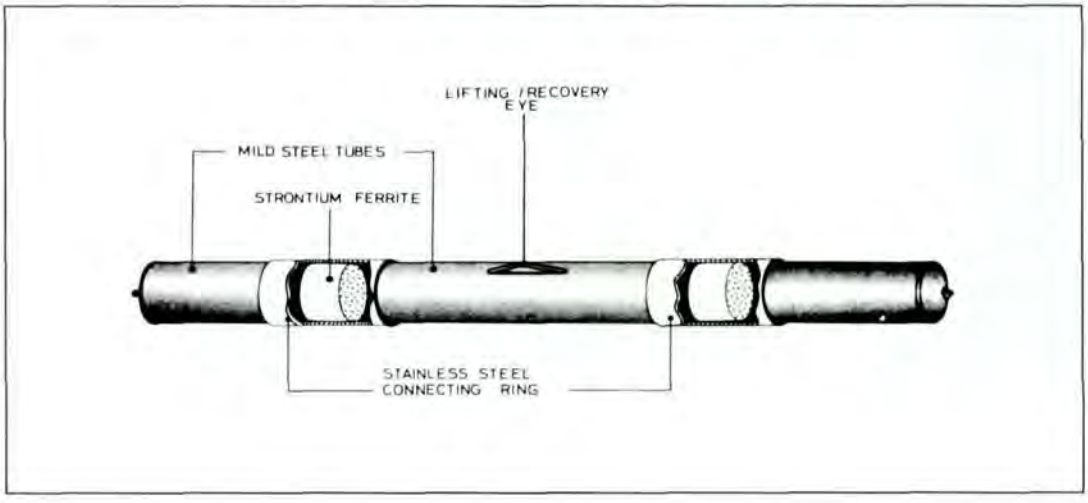

Figure courtesy Defence Research News

'safe' and actually contain many mines posing a considerable threat. The mines logic circuits would have remained poised to detonate on real targets generating the proper rate of build-up, amplitude, signal decay and combination of influence.[53]

Claims have also been made concerning 'breakthroughs' in Australian acoustic influence sweeping but are we again mistaking marginal improvements in managability and cost with real effectiveness against the increasing mine menace?

Some people may point to the advent of the MHI as the panacea to the Australian MCM problem. Yet it must be remembered that we will probably not have these vessels in anywhere near sufficient members to defeat the mine. Also, a disturbing new addition to the miner's inventory will probably be perfected shortly. This being the purpose built Anti-Minehunter mine. The main signature used to detonate this mine is the acoustic spectrum of the sonar employed by the Minehunter to locate the mine in the first place. Such mines can be used sparingly in 'Mixed-Bag' minefields using bottom mounted torpedoes or even rockets to intercept the target MCM vessel.

Developments such as these were recognised in the late 70s and should be looked upon with concern. In 1979 Professor GK Hartmann, then recently retired Director of the US Naval Ordnance Laboratory, said;

'. . . (there is) a point which I think to be of considerable importance and it is this. As mines and their mechanisms and their data processing computers become more sophisticated — and they are virtually at this stage now — they will be able to distinguish between a real target and the counter-measure designed to simulate it. It is now virtually impossible to sweep a mine which requires magnetic, acoustic and pressure influences properly sequenced in time without providing to the mine a simulator of these influences which is actually a ship! Therefore, the future of countermeasures may depend more on ordnance oriented devices than ship oriented devices'.[54]

Hartmann had been involved with high level mine research and development for some thirty years prior to making this emphatic statement. Surely we must take the hint and look at adapting to the vastly increased 'cunning' of the modern mine and its master. Trying to cope by using slightly improved methods of influence sweeping and a small contingent of in-shore minehunters limited to seastate 3 operation, will probably not be good enough.

CONCLUSION

The mine has drawn an enormously disproportionate response from Australians in two world wars. It was a 'natural' weapon for use against Australians then and it remains so. Our disgraceful record in mine counter measures when attacked on both occassions has been described in this article. Also, the efficacy and integrity of the current Australian approach to mine counter measures, has been questioned. Resultant unpreparedness may lead to being caught 'a day late and a dollar short' by the mine once again.

I believe that Australians have been inadequately 'insured' against the mine threat in terms of word, thought and deed since World War One. This situation persists and will continue to persist until the RAN gets over its facination with the 'big guns of naval warfare and concentrates far more seriously on countering the mine menace — the threat with precedent.

NOTES

1. For a detailed account of all major raider operations in World War II see Woodward (1955).
2. Ruge, p 138.
3. Woodward, p 132.
4. Ruge, p 138 and Woodward, p 133.
5. Department of Navy Letter 175/201/44 dated 25 July 1966. 'German Minelaying in Australian Waters 1939–45, This letter gives full details of ship sinkings and sweeping efforts. Extracts from Kruder's log are included as an Annex. (Reference File No: 76/8)
6. No record exists of any other US vessel being sunk before 1941.
7. See reference (note 5).
8. Woodward, p 134.
9. Ibid.
10. See Weyher K. and Ehrlich H, for a first hand account of Orion's cruise.
11. See reference (note 5).
12. Woodward, pp 177–181 gives an outline of the encounter based on German correspondence.
13. An eye-witness account of WOLF's voyage is given in Alexander (1968). The New Zealand minelay is described in pp 17–33.
14. Ibid, p 32.
15. Ibid, p 36.
16. Ibid.
17. Ibid.
18. Ibid, p 37.
19. Ibid, p 38.
20. Hermon-Gill, p 708.
21. Elliot, p 36.
22. See reference (note 5).
23. Cited in *The Melbourne Herald*, 9 November 1940, p 1.
24. *The Melbourne Herald*, 11 December 1940, p 3.
25. Cited in the *Melbourne Herald*, 7 December 1940, p 3.
26. *The Melbourne Herald*, 9 December 1940, p. 3.
27. See reference (note 5).

28. Ibid.
29. Elliot, p 36.
30. See reference, note 5.
31. Elliot, p 37.
32. Ibid, p 36.
33. See Truver (Article) pp 101–109 for a detailed account of mine counter measures during the incident.
34. Ibid, p 104.
35. Ibid, p 106.
36. Hoffmann (Article) p 152.
37. Luckow (Article) p 24.
38. McCauley (Article) p 25.
39. See 'The Economic and Social Consequences of Nuclear War', *Natuni: The Journal of the Australian National University*, September 1983, p 8. Figures are cited from Imports Australian (Canberra, Australian Bureau of Statistics, June 1982).
40. Ibid.
41. Ibid.
42. This statement was made by Dr H.C. Coombs in ibid.
43. Bateman, p 148.
44. O'Connor (Article) p 11.
45. Apps (Article) p 21.
46. See J. Stackhouse, 'New realities of national planning', *The Bulletin*, 25 October 1983. A high ranking BHP shipping executive (Mr J. Prescott) was quoted as saying '... the distance from Port Hedland to Port Kembla NSW, was about 4,800 km around a largely exposed coast. Five 140,000 tonne bulk carriers ply the Hedland-Kembla trade. If two or three of these were sunk or bottled up, Australia's steel making potential would be halved'. Obviously, the sinking of one ore carrier in the Hedland tidal races while another vessel was berthed would satisfy the conditions described.
47. Ibid.
48. McCauley (Article) p 25.
49. Spanier, p 4, defines Power as 'the ability to influence others in accordance with one's ends or as the 'ability to make one's will prevail'. National power may be defined as the ability of a nation to influence the behaviour of other nations.
50. Civilian speedboats and small launches were used to deploy mines during the mining of Nicaraguan ports in 1984.
51. See, for example, Grazebrook, A, 'Technical Breakthrough in Mine Countermeasures,' Pacific Defence Reporter, February 1985.
52. McCoy, p 39, 41.
53. Ibid, pp 41–42.
54. Hartmann, p 129.

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ADDRESS TO THE ANNUAL GENERAL MEETING
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"AUSTRALIAN NAVAL HISTORY AFTER 75 YEARS"

By Lieutenant Tom Frame, RAN

INTRODUCTION

I am thankful to the Canberra Chapter of the A.N.I. for providing me with this opportunity to present a paper describing some of the research which I conducted during last year, the 75th anniversary year of our Service, on the "state" of published naval history in Australia. 1986 was a good year to make an enquiry such as this. Historical interest and awareness seemed to be at a peak as Service personnel and civilians alike were touched by the celebrations. I hope this desire to extend historical awareness within the Service and among the community continues as we ride the crest of a wave that began in 1986 and which should peak in 1988 with the Australian Bicentennial. The cumulative benefits of this awareness for the RAN are substantial. While the specific purpose of this paper is not to counsel the many uses of naval history including ascribing to naval history an operational function, they cannot be denied a place in our thinking. Without an historical account to read and in the absence of an officially sponsored research programme in place, historical awareness is virtually impossible. Hence the relationship between this paper and the general topic of the role of naval history in contemporary naval life.

This paper is divided into three parts. In the first part, I will outline extant works on Australian naval history. In part two I will highlight particular areas of deficiency; suggesting the areas of Australian naval history which require the most urgent attention. Part three will detail a few thoughts I have on how the deficiency of published histories on the RAN can be addressed with the hope of achieving a balanced picture of the 75 years that the RAN has experienced.

PART I — HISTORICAL SCHOLARSHIP

I first became aware of deficiencies in the written history of the RAN when attached to the Australian War Memorial (AWM) as the first Summer Vacation Scholar in early 1985. It was here that I noticed very quickly that there were many more army and air force oriented books than works on naval history. This was not because fewer had been acquired by the AWM, arguably the largest holder of military/naval books in Australia, but for the simple reason that considerably fewer had actually been written. This deficiency in published naval history begins, in my opinion, with the standard texts on Australia's involvement in World Wars I and II. I am not making the assertion that either Bean or Long, as the general editors of the series, acted upon any particular bias. My argument is that the sheer volume of naval activity is disproportionately represented in both series. Or in other words, the army has done very well. Why we lack as complete an account of RAN wartime operations is the product of a number of factors which can be readily identified.

By way of contrast with the war at sea, land operations were the subject of more detailed and continuous reporting. Reporters and correspondents had greater access to the sites of land actions and could move much more rapidly from one battlefield to another. They could witness the action, observe its ferocity or destruction, talk to the soldiers and their officers then quickly move on to the next scene of dramatic action. On the other hand, warships very often acted independently in remote waters without specific instructions for considerable lengths of time. And in the days before 'vertreps' were possible, the movement of correspondents was comparatively slower across the water than on the land. Many smaller units steamed for days without encountering the enemy only to be involved in an engagement of several minutes duration when hostile forces were found. Some of these actions even semed too routine, too

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The heavy cruiser Australia at the reserve dolphins in Athol Bight, Sydney, in 1954, after her de-commissioning.

Photograph courtesy Vic Jeffery

much like peacetime activity for them to be written down and recorded. Much of the convoy escort work naval war was fought at a very different pace. The effect of this on the print media was profound. Stories took a long time to be relayed to earnest editors and quite often the news they conveyed was too "old" and of insufficient impact. Hence, the reduced numbers of naval correspondents during wartime. This had an overall negative effect on the historical record of the RAN at war. The war at sea is difficult to record and report. It is just as difficult to explain the complexities of naval warfare to the civilian laity. Modern reporting on the Falklands War reflected these difficulties.

THE WRITTEN HISTORY OF THE RAN

It has now been one hundred years since Heinrich von Treitschke was reputed to have told a hall crowded with German officers that the periods of peace constitute the empty pages of history books. Wars have provided the pretext for most of the history of the RAN to be written. The stark and empty pages are indeed those detailing the history of the Navy in peacetime. I believe this is a most unsatisfactory situation. The greatest part of the RAN's history is made up of peacetime activities. In the seventy-five years of RAN history, only twenty years have been spent under conditions of war: four in World War I, six in World War II, three in Korea and seven in Vietnam (taken from the first voyage of HMAS Sydney (III) to Vung Tau, South Vietnam, in 1965). To suggest that the RAN's history is not predominantly moulded by peacetime conditions is to attempt to create a very false and misleading impression of the content of the 75 years that was celebrated last year. It will become quite obvious that an imbalance exists in the published history of the RAN and that some false impressions have indeed been created.

I have attempted to locate every major work that comes under the umbrella of Australian naval history. I have not included smaller articles of less than one thousand words. Each study has been placed in a chronological or topical classification for ease of reference. This survey will be useful to A.N.I. members who may wish to either broaden their reading or be guided before undertaking their own research.

THE COLONIAL PERIOD AND THE CREATION OF THE RAN

The only work to analyse the entire pre-history of the RAN is that by John Bach, *The Australia Station: The RN in the South-West Pacific 1821–1913* (1986) while the most comprehensive works detailing the central events in Australian late colonial naval history are by Ross Gillett, 'Australia's Colonial Navies' (1982) and 'Australian Colonial Navies' (1986) by Colin Jones. These studies bring together the diverse colonial efforts at establishing naval defences. Specialised assessments of this period are contained in Meredith Hooper, 'The Naval Defence Agreement of 1887' (1968), Fitzhardinge, 'Russian Naval Visitors to Australia, 1862–1888' (1966) and Philip Cowburn, 'The British Naval Officer and the Australian Colonies: An Aspect of Nineteenth Century Colonial History' (1968).

Works examining the individual colonial navies have been written by Greig. 'The First Australian Warship' (1923), outlining the history of HMCS Victoria, M. Austin, 'HMCS Victoria' (1981), W.P. Evan, 'Deeds, Not Words' (1971) dealing with Victorian naval defence particularly at Williamstown; Parsons, 'The Navy in South Australia' (1974), H.M. Cooper, A Naval History of South Australia (1950) and Rear-Admiral Creswell — the 'Father' of the RAN — in a series of newspaper articles headed, 'Our First Australian Warship — Story of the Protector — Interesting Reminiscences by Admiral Creswell' (1924) (note the conflict over which ship was the 'first' Australian warship) and Normal Pixley 'The Queensland Maritime Defence Force' (1960).

The Australian involvement in the international suppression of the Boxer Rebellion in China during 1900 is well handled by Bob Nicholls in 'Blue Jackets and Boxers' (1986) although he has been criticised for describing the events in an apparent "moral vacuum" as he seems to avoid making judgements on the conduct of the bluejackets while in China. Less complete accounts can be found in W.H. Blake, 'The Adventures of a Chief Naval Gunner' (1906) and Evans, 'Deeds, Not Words'. The broader outlook of international defence and the requirement for naval power is analysed in D.C. Gordon, 'The Imperial Partnership in Imperial Defence 1870–1914' (1965), Neville Meaney, 'The Search for Security in the Pacific' (1976 — Vol. 1 of A History of Australian Defence and Foreign Policy 1901–1923) and D.C. Sissons, 'Attitudes to Japan and Defence 1890–1923' (University of Melbourne thesis, 1956).

The latter part of the colonial period deals with the numerous efforts of the colonies and later the federated states to establish an integrated naval force. This leads quite naturally into decision-making associated with the creation of the RAN.

'The Genesis of the RAN' (1949) by G.L. Macandie is the standard text although R.G. Roberts, 'Birth of a Navy' (date unknown), Feakes, 'White Ensign, Southern Cross' (1951), Batt, 'Pioneers of the RAN' (1967), C.E.W. Bean, Flagships Three (1913), and William Jameson, 'The Fleet that Jack Built' (1962), all add to the story in different ways. In the only other naval work written by G. Hermon Gill — the World War II official naval historian — is an article entitled, 'The Australian Navy: Origin, Growth and

Former RAN Flagship HMAS Sydney III bound for the breaker's yards in South Korea December 1975.

Photo courtesy Vic Jeffery

Development' (1959). Most of the general texts on RAN history also cover the origins of the service.

WORLD WAR I

The history of the newly formed RAN in World War I has not been the subject of many works. The standard text is the official history by A.W. Jose, The Royal Australian Navy (Vol. IX in the series). An interesting insight into the actual writing of the volume is provided by Stephen Ellis in his article 'The Censorship of the Official Naval History of Australia in the Great War'. Other works detailing the period concern the major naval engagement involving the RAN during the war; the sinking of the German cruiser SMS Emden by the cruiser HMAS Sydney (I) off the Cocos-Keeling Islands. Three of these books have been written by Germans, Adolf Hoehling 'Lonely Command' (1957) (a history of SMS *Emden including the Sydney action*), Helmuth von Mucke, 'The Emden' (1917) and Crown Prince Hohenzollern, 'Emden' (1928). The other major studies of the engagement are Hoyt's book, 'The Last Cruise of the Emden' (1967) which includes the results of more recent research and Dan van der Vat's 'The Last Corsair'.

The activities of the RAN Bridging Train in the Middle East and the fighting seen by Australian naval brigades in German New Guinea and wireless stations in Micronesia are yet to be adequately chronicled. The only detailed account of either is C.D. Rowley's 'The Australians in New Guinea 1914–21' (1958).

THE RAN IN WORLD WAR II

It is fortunate that the few 'scholarly-academic' works on the development of the RAN have been written on the inter-war years. These works include the excellent book by John McCarthy, 'Australia and Imperial Defence 1918–39: A Study in Sea and Air Power' (1976), the informative study of an often disregarded area of naval history by Robert Hyslop, 'Australian Naval Administration, 1901–39' (1973) and the unpublished ANU thesis by B.N. Primrose, 'Australian Naval Policy, 1919–40'. Other than

Battle damage to the cruiser HMAS Hobart. View is from centre line of Wardroom about 179 station after the majority of the wreckage was cleared away.

Photograph reproduced from AWM No 300789

these dedicated studies the only other writer to give some expanded treatment of these crucial years for the RAN is Gill in the first of his two official volumes, 'The RAN 1939–42' (1957), and 'The RAN 1942–45' (1968).

The war years are covered most adequately by these official volumes although they contain some information now known to be incorrect. The account of the MV Krait and Operation Jaywick being an example of the case in point. Gill provides a succinct description of the development of defence policy leading up to World War II, dealing with the 1919 Jellicoe Report, the Washington and London naval conferences and the growing concern over the encroachment of Japan upon mainland Asia. As an ex-merchant seaman who served throughout World War I at sea, Gill has utilised his own experience to provide valuable insights into the naval war, especially in the period up to 1943 when the Australian navy suffered heavy losses. Both volumes could have been improved by the inclusion of more general maps and the corrigenda is annoying. It is also unfortunate that Gill neglected to detail the actions of many Australians who served with the British. Some of these personnel were involved in key Allied naval actions. Two significant examples can be cited.

Lieutenant (later Commodore and late Governor of Queensland) James Ramsey was Officer of the Watch aboard HMS King George V when the German battleship Bismarck was spotted, chased and finally sunk. Lieutenant (later Rear-Admiral) Galfrey Gatacre was Navigating Officer in HMS Nelson during 1940 and HMS Rodney during 1941–42. In 1941, while in Rodney, Gatacre was also involved in the sinking of the Bismarck.

Though detailing the world strategic disposition necessitated by the great diversity of Allied naval operations, Gill also glosses over the importance of some aspects of the Australian–American naval relationship, specifically with regard to the American ship building and repair organisation — the Seabees. Nevertheless, Gill's volumes are now looked upon by most historians as examples of very well written naval history. The recent re-publishing of both volumes, with corrections, by Collins and the AWM is most welcome. Other works (excluding general texts) dealing with the RAN in World War II are comparatively few in number.

The wartime series 'HMAS' (1942), 'HMAS MKII' (1943), 'HMAS MKIII' (1944) and 'HMAS MKIV' (1945), written entirely by sailors and produced by the AWM, provides an interesting insight into how naval personnel viewed the war, their predictions of the future and the role they would play in it, all told around a vivid description of life at sea in Australian warships. Written in a similar style are the 'historical novels' of Australian writer J.E. Macdonnell. As a "down-under" version of Nicholas Monsarrat, albeit a little 'lighter' in terms of characterisation and plot, Macdonnell has produced numerous (I am led to believe near one hundred) novels which contain ongoing accounts of his three most famous

HMAS Hobart, Australia's last cruiser, is towed out of GID in March 1962 for Japan and breaking up.

Photo courtesy Vic Jeffery

characters; Gently, Holland and Brady. These novels are an excellent account of how the RAN operated during the war and are great adventure reading. In colourful terms Macdonnel portrays the differences between "big ships" and "small ships" mentality and lifestyle, the nature of the relationship shared by permanent force, reserve and volunteer members of the RAN and the ascendent position within ships occupied by the Gunnery Department of the Seaman Branch. For anyone wanting to know what 'things were like', the novels of J.E. Macdonnell, a serving member of the RAN before, during and after the war, are a treasure trove of insight and experience, reminiscent of Monsarrat's 'The Cruel Sea' and 'Three Corvettes'.

A general view of the war is provided by Jones and Idriess in 'The Silent Service' which contains "a number of stories" about battles at sea in the Australian and New Zealand navies. 'The Coastwatchers' (1946) by Eric Feldt, 'Fire Over the Islands' by D.C. Horton and 'Lonely Vigil, Coastwatchers of the Solomons' by Walter Lord, describe the activities of mainly RAN Volunteer Reserves in Pacific coastwatching while Clarke and Yamashita's book, 'To Sydney by Stealth' (1966) details the failed Japanese plan to destroy Allied warships in Sydney Harbour using midget submarines. Pacini traces the final stages of the war as he follows RAN units as they proceed towards the Japanese home islands in 'With the RAN to Tokio' (1945).

Two of the more dramatic naval engagements involving the RAN, the Battle of Matapan and the Battle of Sunda Strait, are described by Pack, 'The Battle of Matapan', and Ron McKie, 'Proud Echo' (1953), which recounts the loss of HMAS Perth in the Sunda Strait.

Clearly the most controversial incident within Australian naval history is the sinking in November 1941 of the Leander Class light cruiser HMAS Sydney (II), the pride of the RAN as the victor at Cape Spada against the celebrated Italian cruiser Bartolomeo Colleoni, by the German armed merchant raider HSK Kormoran. This action near Carnarvon on the Western Australian coast made Sydney the only warship to be sunk by an armed merchant raider in the course of the entire war. The dispute around which the controversy revolves relates to various explanations of how the experienced and capable Sydney could hjave been overcome by such a lower-powered foe. The successful 'raiding' career of the Kormoran lasting just over one year is recounted by H.J. Brennecke, 'Ghost Cruiser HK33', (1954) and the vessel's captain Theodor Detmers, 'The Raider Kormoran' (1959). Another insight into the raider's operations is contained in Jones and Taylor, 'Prisoner of the Kormoran' (1944). More recently the debate has been re-opened by Michael Montgomery (son of the navigator of Sydney), 'Who Sank the Sydney?', (1981) who claims that there was Japanese submarine collaboration in the sinking prior to the Japanese attack on Pearl Harbour. Montgomery then proceeds to argue that there was an official cover-up during and after the war to protect the United States who had continued with their isolationist line in spite of, Montgomery claims, almost immediate information that an act of war had been committed by Japan. A very well researched and presented response is offered by Barbara Winter in 'HMAS Sydney: Fact, Fantasy and Fraud' (1985). Mrs Winter attempts to disprove many of the 'fantasies' and 'frauds' which followed the devastating sinking using a very wide range of sources. Her book has, I believe, dispelled any notions of Japanese collaboration though the debate is probably not over yet.

POSTWAR: KOREA AND VIETNAM

The role of the RAN in Korea is explained by O'Neill in the two volumes of his 'official' history: 'Australia in the Korean War: Vol. I Strategy and Diplomacy' and 'Vol. II Combat Operations'. The treatment given is, however, fairly broad and descriptive. Some of the account is filled out by Bartlett, 'With the Australians in Korea' (1954). The next conflict in which the RAN was involved, "Confrontation", is given partial treatment in J. Mackie, 'Konfrontasi: The Indonesian-Malayan Dispute 1963–66' (1974) while Denis Fairfax, an RAN Instructor Branch Officer (a recently retired commander in the RNZN), has written the only account of naval involvement in the Indochinese war in 'Navy in Vietnam', a 'semi-official' publication sponsored by the Department of Defence and published by AGPS in 1980.

The 'official' history of Australia in the Vietnam War is currently being prepared by Dr Peter Edwards in seven volumes. One of these volumes is planned to contain an account of the role of the RAN in the Malayan Emergency and the Vietnam War itself: the deployment of the troop carrier HMAS Sydney (III) and the role of the requisitioned supply ships Boonaroo and Jeparit; the destroyer detached with the US 7th Fleet on the "gunline", the functions of the RAN Helicopter Flight Vietnam (HFV), personnel attached to 9 Squadron RAAF and the Clearance Diving Teams (CDT).

The CDTs' operations in Vietnam have been vividly described by the late Captain Ross Blue in his monograph, 'United and Undaunted' (1976).

Additional information on the RAN in Vietnam can be obtained from each ship's "Cruise Books" which were prepared during and after

each destroyer deployment as the ship's company's record of what happened during their six months away from Australia.

SHIP HISTORIES

The standard volume on RAN ships is John Bastock's excellent book, 'Australia's Ships of War' (1975). The research behind the book has been painstakingly conducted and has resulted in a very readable book which gives an outline of the history and technical details of every Australian man o' war. Other larger works on warships which adopt either a chronological, alphabetical or 'type' structure are Graham and Gillett, 'Warships of Australia' (1977), Graham Andrews, 'Fighting Ships of Australia, New Zealand and Oceania' (Revised Edit. 1980) and Lind and Vollmer, 'Australia's Men O' War' (paintings of RAN ships).

The colonial period is partially served by G. Ingleton, 'Watchdogs Infernal and Imperial' (1935), which details the history of warships to bear the name Cerberus. Other works to describe the ships of the colonial period are those by Colin Jones, Bob Nicholls and Ross Gillett of which mention was made in the colonial section.

World War I has been the subject of comparatively few ship histories. Of those written the bigger ships have naturally attracted greatest attention; Daw and Lind, 'HMAS Sydney 1913–28' (1974), Lind 'HMAS Parramatta — Torpedo Boat Destroyer' (1973) and Brennand and Kingsford Smith, "The War Cruises of HMAS Melbourne and Sydney" (unpublished 1921).

Histories of World War II vessels are in for greater abundance although some degree of repetition is evident. The most popular vessel is, of course, HMAS Sydney (II) whose controversial sinking has been the subject of no less than five books. Further histories written on the six year career of the light cruiser include W.H. Ross, 'Stormy Petrel' (1946), G.H. Johnston, 'Grey Gladiator' (1941), dealing with the successful cruise of Sydney to the Mediterranean, J.A. Collins, 'HMAS Sydney 1936–41' (1971) — with many valuable insights from the captain of Sydney prior to the last fateful cruise — and Scott, 'HMAS Sydney' (1962).

The second most popular vessel among historians has been the sister ship of Sydney (II), HMAS Perth (I), which was sunk by a large and more powerful Japanese force during 1942 in the Battle of Sunda Strait. Perth's last heroic fight features in Payne's, 'HMAS Perth' (1977), Ron McKie's 'Proud Echo', Parkin's, 'Out of the Smoke' (1960) and Robert's, 'Age Shall Not Weary Them' (1942). An interesting sideline to the history of the ship and the Battle is the book, 'The Bells of Sunda Strait', by David Birchell who located the wreck of Perth in the 1960s and conducted salvage operations on the ship to recover, among other things, the ship's bell.

Other major ships to have histories written about them include, 'HMAS Hobart' (1971) by Lind and Payne, 'HMAS Australia' (1975) and 'HMAS Canberra' (1974) both by Payne, 'HMAS Yarra' by Parry and the 'Price of Admiralty' (1944) by F.M. and P. McGuire — detailing the career of the second HMAS Parramatta. It is notable that most of these single ship histories have been written under the auspices of the Naval Historical Society.

The famous "Scrap Iron Flotilla", so-named by Field Marshal Rommel, is thge subject of several good works which demonstrate the usefulness of examining a class of ship and not just an individual unit. These volumes are Lind and Payne, 'Scrap Iron Destroyers', and J.F. Moyes, 'Scrap Iron Flotilla', which outlines the activities of HMAS Stuart and the 'V' and 'W' Class destroyers in the Mediterranean. A single ship history has been written on one of the group — 'Stuart, Leader of the Crocks' (1945), by L.E. Clifford. The 'N' Class destroyers are examined in, 'The 'N' Class' (1972), by Lind and Payne while the armed merchant ships are dealt with by W.N. Swan, 'Spearheads of Invasion' (1953), covering HMA Ships Kanimbla, Manoora and Westralia, and O.E. Griffiths, 'Cry Havoc', dealing with HMAS Kanimbla. The only other multi-ship history is that by Iris Nesdale, 'The Corvettes' (1982), which recounts the careers of the fifty six Bathurst (Town) Class minesweeper/corvettes built and operated by Australia during the war.

More recent ship histories have been dedicated to the most controversial ship in RAN history; the modified Majestic Class aircraft carrier HMAS MELBOURNE. Two were published around the time of her decommissioning in 1982. Both are 'popular' works and do not answer most of the questions we might like to ask about the ship and its aircraft; *HMAS Melbourne* (1982) by Timothy Hall and *HMAS Melbourne: 25 Years* by Ross Gillett (1981). Research has been undertaken by ANI member James Goldrick into the acquisition of aircraft carriers for the RAN. In 1985 he prepared a paper on this subject for the International Naval History Symposium in Annapolis and this has gone some way in remedying the deficiencies in the written history of the early period of Australian carrier-based warfare and the Fleet Air Arm.

It seems natural that warships should be the focus of historical enquiry and research. Yet one cannot help but feel that a number of these works treat their subject matter: the ship, the

time period and the location of activity, within a static framework that tends to create a number of false impressions. The cumulative effect is substantial. The pictures these historians provide of a ship are very often unreal and artificially succinct. I believe that a more accurate picture would be gained from looking at these ships as elements of squadrons/flotillas etc., as some authors have done, within the broad fleet disposition that had been formed to give the total naval war a unified thrust and organisational structure. This feature of the writing of Australian naval history is possibly its greatest defect. Thus a greal deal of naval activity is co-incidentally covered insofar as it relates to the particular fleet unit being examined. Gill's volumes avoid many of these pitfalls. He describes naval units in terms of their defined contribution to the larger organisation, in relation to the war in the air and on the ground within the context of a global, or at the very least, regional military and strategic perspective. His approach is again commended to all writers involved in recording Australian naval history for public dissemination.

GENERAL WORKS

As one involved in the teaching of naval history I have long felt the need for a general text to which students can be referred. Several general works are available although each seems to be aiming at a different audience.

The government sponsored publication, *An Outline of Australian Naval History* (AGPS 1976), is a good attempt though it is now quite dated. *The RAN: An Illustrated History* (1982 — since revised), by George Odgers is the second the author is producing on the Australian Defence Forces. This is a quarto-size 'coffee table' type book with a high quality glossy finish. The author adopts a very general approach to the subject matter as he briefly narrates the naval history of Australia since 1788. Owing to the obvious constraints of space, Odgers has been unable to provide in-depth analysis of the events or people he describes. Littered with photographs the book does a very good job of conveying the sense or feel of naval history. The other more recent major work on the RAN's history is the revised edition of Peter Firkins', *Of Nautilus and Eagles* (1983). This book engages in some analysis of historical events and themes. However, and I think to a very unnecessary degree, Firkin has relied heavily upon secondary sources, evidenced by the footnotes, and included too many lengthy quotations from these works or official material (see pp. 135–148).

Lew Lind's book, *Historic Naval Events of Australia Day By Day* (1982), has been a particular favourite of Naval College midshipmen. At the College and in the training ship, HMAS JERVIS BAY, midshipmen are often required to present short talks on significant events occurring on that day in naval history. Mr Lind's book has proved to be a very handy resource. Although difficult to use by historians because of its arrangement this book contains a

The last three Bathurst-class minesweepers of the once eleven strong Fremantle Reserve Fleet Detachment are readied for their last voyage to the Japanese shipbreakers, 27 November 1957.

Photo courtesy of WA Newspapers Ltd.

great amount of valuable information. Yet there are some glaring factual errors that Mike Fogarty has identified in his review of the book in *Sabretache*, vol.15, Jan/Mar 1984. Many of the problems of this edition have been addressed by the author in the new edition of the book under the title, *The RAN, Historical Naval Events Year By Year* (1986).

MISCELLANEOUS

It now only remains to include some brief reference to those works which do not adequately fit into the categories listed so far.

The historic defences of Port Phillip Bay are described in *Port Phillip Pilots and Defences* (1973) by Captain J. Noble and by Dr T.B. Millar in his Melbourne University thesis, 'History of the Defence Forces of Port Phillip' (1957). The training of junior officers is very superficially handled by F.B. Eldride, *A History of the Royal Australian Naval College* (1953), while the early training of sailors is recounted in A.J. Martin, *History of Westernport and Flinders Naval Depot* (1927). The history of the WRANS (Womens Royal Australian Naval Service) as a distinct group has been written by M. Curtis-Otter, *WRANS (1975)*, and as part of the Australian tradition of servicewomen in Patsy Adam-Smith, *Australian Women At War* (1984). The only history of the Navy's Garden Island Dockyard is that by Chaplain Vivian Thompson RAN, *A Short History of Garden Island* (unpublished 1922) while Mark A. Harling has examined the pattern of industrial relations in the dockyard within an extended time frame in his excellent work, *HMA Dockyard Garden Island: Ready to Serve?* (1984). Admiral Collins as possibly Australia's most famous wartime naval figure has recorded his perceptions of important wartime events in his book, *As Luck Would Have It: The Reminiscences of an Australian Sailor* (1945). Alfred Festberg has provided a 'bible' with his work, *Heraldry in the RAN*, while Jim Atkinson's book, *By Skill and Valour* (1986), sub-titled 'Honours and Awards to the RAN for the First and Second World Wars', is the first such work on Australian naval awards. Ivan Southall has recorded one of few accounts of RAN servicemen abroad in his book, *Softly Tread the Brave*, which details the actions of two RAN Bomb and Mine Disposal officers serving with the Royal Navy. And in an event yet to be thoroughly examined, the wife of the captain of HMAS MELBOURNE at the time it collided with USS FRANK E. EVANS, has recorded the events leading up to and following the proceedings initiated against her husband as a result of the collision. *No Case To Answer* by Mrs

Three cheers for the King! . . . are called for by Captain J.A. Collins, CB, RAN at the handover of HMS Shropshire to the RAN to replace HMAS Canberra, lost in the Solomons.

Photograph reproduced from AWM No P444/94

HMAS Voyager — sank after colliding with HMAS Melbourne in 1963.
Photograph reproduced from AWM No 301651

Joan Stevenson is a testimony to the importance of naval wives in supporting their husbands but should be the basis for a fuller historical enquiry into the conduct of the whole incident.

PART II — AREAS OF DEFICIENCY

From this survey I have compiled it is obvious that a great deal of the RAN's history is yet to be written. Ship histories account for the bulk of the written history of the RAN while the greatest need at the moment is for detailed analytical assessments of the Navy over a prolonged period, particularly during peacetime. Scholars of history and universities have neglected naval history in Australia and this is one specific reason for its current state. More 'popular' works naturally have their have their place but they are not substitutes for works which could be described as 'significant' as the term is used by Professor Geoffrey Blainey. Little effort has been exerted by 'popular' historians (this term I am applying to those people who write books for 'popular' consumption) in highlighting the lessons which should be learned from past events. Very few controversial questions have been raised. Fewer attempts have been made to actually answer them. Except for the mysterious sinking of HMAS SYDNEY (II) and the MELBOURNE collisions, Australian naval history seems to be free of major controversy or ongoing debate. But are there so few disputable interpretations of this domain of Australian naval history? I don't believe there are.

Whereas Australian military historians such as Lieutenant-Colonel David Horner have succeeded in stressing the contemporary relevance of the study of military history and have provided historical works rich in controversy, object lessons and analysis aimed at establishing the persistent themes and locating 'cycles' in the subject matter, historians of naval history have tended to neglect the making of contrasts and comparisons and have largely ignored the importance of analysing the past in the light of present experience. This is a consequence of having only a few scholarly works available as guides or resources. What I would hope to see in the near future is a study which provides a theory or a framework accounting for the development of the RAN from its pre-history until the present day.

To be more specific, we lack studies which analyse the RAN — RN relationship and later the RAN — United States Navy (USN) relationship. The latter is particularly significant in the light of the present debate over the role of the USN in Australian security and defence. Beginning with the early period of the RAN — USN relationship, what was the strategy of the USN in utilising the RAN as part of one of its fleets? What was the objective of the USN in attempting to retain wartime bases in the light of an expanding post-war RAN? Were these bases linked to American perceptions of the quality of Australian naval power? How much did Australia plan its naval development to supplement or complement the

U.S. Pacific Fleet? What effect did the Australian acquisition of carrier-based warfare have on the overall relationship?

Questions such as these need to be asked and adequate answers provided if we are to gain an understanding of the more intimate aspects of the Australian-American alliance. There is also a need for historians to examine such factors as the long-term economic restraints affecting the size and structure of the RAN, the nature of perceived maritime threats to Australia and the historical role of the RAN in strengthening national security. While separate wartime operations have been described in some detail, research is particularly needed into the areas of international naval defence co-operation; joint exercises and the associated exchanges of tactics, equipment (both capital and consumable), classified material and intelligence and professional expertise during *peacetime* — the predominate climate for the RAN since 1945 (despite the Korean and Vietnamese wars in which naval power was not extensively used). In a similar vein we are yet to read studies comparing the naval developent of Australia's Commonwealth partners particularly Canada, India and New Zealand. In a different area: What about the relationship shared by the various political parties, when in government, and the RAN? Has one party shown a greater regard for naval power than the other? And how have Australian governments looked upon the RAN as a vehicle for fulfilling Australia's treaty obligations under ANZUK, SEATO and ANZUS?

THE AREAS REQUIRING ATTENTION

The following is a listing of subject areas and topics for which very little historical literature exists if any at all. They have been placed in subject areas and not in the familiar but somewhat tired chronological structure in which one usually finds them.

PERSONNEL

Department and branch (ie Gunnery, TAS)
List (ie, SD, SL)
WRANS/RANNS
RANR/RANEM/RANR(S)/RANVR/Sea Cadets/Sea Scouts
Naval Police/Provost Marshall
Medical/Dental
Chaplains/Social workers
RN transfers to the RAN
Autobiographies/Biographies

OFFICIAL LIAISON

RAN and RAAF/ARA
RAN and Maritime Services Boards/waterfront unions
RAN and Water Police
RAN and emergency and disaster relief organisations
RAN and civil/merchant shipping
RAN and ex-service associations and groups
RAN and royalty
RAN and its Admirals of the Fleet/Commanders-in-Chief
RAN and Commonwealth navies (comparisons and contrasts)
RAN and RN/USN
RAN and PNG/Pacific Islands
RAN and DCP/SEATO

TRAINING IN THE RAN

Technical training
Training Technology
The role of RN/USN service colleges
The training of foreign personnel in Australia
Fire-fighting and damage control training
Tertiary education institutions and the RAN

OPERATIONS

Antarctic expeditions
Survey, oceanographic, scientific
Emergency/disaster relief/rescue/salvaging
Naval intelligence/censorship/propaganda
Recruiting
Transport and logistic support
Wartime naval civil defence measures

ADMINISTRATION IN THE RAN

Staff work and staff work training
Courtsmartial/punishment/discipline/legal affairs
Logistic support organisation and management
The role of Commonwealth Naval Board (CNB)
The powers and functions of CBN members
The assumption of command and control by the RAN
The role of the Australian Commonwealth Naval Board (ACNB)
The development and dissolution of the ACNB
The role of the Minister for Defence
The role of the Defence Secretary

SHIPS

Procurement/disposal
Shipbuilding/ship design
Class/squadron
Battle honours detailed and explained
Origins of ship names

GENERAL/OTHER

Aircraft and squadrons
Music and naval bands
Sailing and watercraft
Sport and leisure
Historiographical studies; descriptive and analytical
Historical societies and the RAN

The genesis and role of the ANI/USI of A.
Origins and traditions of the RAN
Decorations/citations to naval personnel since World War II

The areas of naval history without adequate treatment from historians are considerable. However, the apparent deficiencies I have identified cannot be countered or corrected overnight. For change to occur and these deficiencies countered, the Navy as a whole needs to become more aware of its origins and traditions, the forces and processes that have shaped its development, the sacredness of this history and the importance it has for each serving member.

PART III: IMPROVING RAN HISTORICAL SCHOLARSHIP

I have compiled another list. This includes some of my suggestions on how things can be improved. Some may seem to be inappropriate owing to either cost or manpower shortages. Notwithstanding these constraints, I believe that if historical studies are seen to be an important component of naval life, ways and means can be found to achieve some profound and enduring change which will significantly enhance the output of the RAN in ways most people are yet to conceive. If nothing else the conditions will be created whereby morale will be boosted and a deeper sense of esprit de corps engendered.

My suggestions on possible ways ahead have been divided into four sections: education for historical awareness, establishing the record, research and presentation (the production and distribution of published works).

EDUCATION FOR HISTORICAL AWARENESS

i) The re-introduction of naval history into suitable courses, particularly at the junior officer level. ii) A conscious moving away from narrative and descriptive history in both teaching and historical writing. iii) The appointment of historical officers as ship/establishment positions for educative purposes and liaison with societies and the community on historical matters.

ESTABLISHING THE RECORD

i) Sponsored oral history projects ii) Retiring senior officers asked to prepare their papers for use by researchers iii) Retired officers approached to consider passing their papers to an archival body for use by historians iv) Local declassification of potential archival material prior to transmission to an archival institution v) The creation of declassification teams for archival materials vi) The delegation of authority to local service museums to build archives relating to their particular areas of concern for public use (the contents being recorded with the AA or AWM and publicised accordingly)

RESEARCH

i) Creation of a Peter Mitchell History Prize ii) Limited ANI research grants for minor historical projects iii) Support for archival projects and volunteer work in historical institutions (such as the ANI is presently offering to Mr G. Calderwood) iv) An expanded Naval Historical Officer staff v) Local history projects conducted jointly by the service and local historical societies or academic institutions vi) Published lists of holdings and locations vii) free advertising for museums/archival bodies in the Journal of the ANI viii) Continued encourage,ent given to personnel involved in potentially historically significant projects/events to prepare their own history of the event.

PRESENTATION

i) An RAN edited compendium/anthology published by AGPS ii) An ANI edited compendium/anthology published by a university press or commercial publisher iii) A combined ANI/AWM — ANI/ANU — ANI/UNSW naval history conference with papers presented to be included in a volume to be published iv) The creation of an ANI Press or joint press to receive manuscripts for publishing on naval topics.

CONCLUSION

It will take a long time to build up a solid base of naval historical study in Australia. Public interest seems to have gone the way of the digger's life and khaki. Yet Australian naval history is rich in drama, adventure, excitement, mystery and all that makes for compelling historical reading. If those of us who have the power to alter this situation take stock of the present state of naval history and feel genuinely disappointed by its inadequacies, there is a chance that real improvements can be wrought by the close of this decade. We should be riding the crest of the wave that began in 1986 with our 75th anniversary into next year as the nation takes a long hard look at two hundred years recalling that the naval input into Australian life made its mark from the very start of this country's history. With the support of the ANI, change can occur and reformation in the state of Australian naval history commenced. This is a very high goal and one worthy of great consideration by the ANI in establishing its order of priorities.

NOBODY ASKED ME, BUT . . .

MEMBERSHIP OF THE ANI COUNCIL

In his report to the February 1987 Annual General Meeting the ANI President drew attention to the need for the Institute's Council to be fully manned at all times, and he suggested that consideration should be given to permitting Associate members to serve on Council. Advantages which would accrue from such a change are addressed in the following paragraphs.

To date, regular membership of the ANI has included only the PNF, while retired and Reserve members of the RAN have been eligible only for associate membership. This situation, besides hampering any real growth in membership numbers and therefore the Institute itself, has other disadvantages. For example, the ANI is denying full membership and council representation to the very people who, in many cases, now have that extra bit of time to devote to organising and contributing to Institute activities.

The situation now arises where a full member who contributes as a Councillor becomes ineligible simply because he/she retires and becomes an Associate member, even if he/she intends to reside in Canberra and wishes to continue working to further the Institute's aims. This restriction deprives the Institute of that commodity so essential to success, ie. willing volunteers.

A criticism which was levelled in the past when non-PNF membership to the Council was considered is that the ANI might become a political lobby group, similar to the RSL, but in the Naval context. It is believed that a balance of PNF to non-PNF members on the Council could be maintained such that the ANI does not move in this way and the original objectives of the ANI could still be maintained. The proposal to be debated at the 1988 AGM will specifically nominate ratios but for the purposes of discussion at this stage there would seem little to fear if Associate membership of Council was restricted to one or two office bearers (but not the President or Vice Presidents) and two or three ordinary councillors. The Council, and indeed the Institute, would greatly benefit should a civilian member assume the position of Secretary or Treasurer, or perhaps Editor of the journal. The continuity which could result from this would be invaluable.

One overseas counterpart, the USN Institute, allows regular membership with full benefit and privileges to all regular and reserve officers in the US Navy, Marine Corps, Coast Guard and National Oceanic and Atmospheric Administration (NOAA), active, inactive and retired. Associated membership on the other hand is open to anyone with an interest in the objectives of the Naval Institute. Adoption of a similar structure for the ANI is not under consideration now, but could be so later. The present proposal concerns Council only and seeks to provide the continuity of time and service so essential to the proper conduct of the Institute's affairs and yet so difficult for Service RAN members to achieve, given the demands of their daily work in Canberra.

The views of ANI members are welcomed either as letters for publication or separately to the Council.

Al. L. Wright

SUBMARINES IN THE RAN PAST, PRESENT AND FUTURE

by Peter Horobin

On 22 November 1985, the Minister for Defence, Kim Beazley was the guest of honour at the rededication of *HMAS Otama* at Neutral Bay. *Otama* is the newest of the Oberons, and it had just completed its first (and SWUP) refit. Mr Beazley made a speech to the OTAMAs and their assembled friends of which the following is an extract:

"As one of the youngest of our Oberons, OTAMA will remain in service for at least another ten years. Throughout that period our submarine fleet will remain fundamental to Australia's independent capacity to deter — or to defeat — any substantial attempt to land foreign forces on our shores.

With their new weapon systems, OTAMA and its sister boats are superbly equipped to take advantage of the technological edge which makes submarines today such a potent strike platform.

Sixty years ago, in July 1923, the then leader of the Labor Party in Federal Parliament, Matthew Charlton, told the House:

'The future policy of Australia should be to defend our own shores from the enemy . . . I believe we can best do so with aerial and submarine forces' he said.

'We are often told that Australia will be unable to defend her 12,000 miles of coastline in the event of war. My opinion is that Australia can defend herself against any foe who may come here . . .'

'More attention should be devoted to strengthening our aerial and submarine forces.' "

SUBMARINE OPERATIONS IN DEFENCE OF AUSTRALIA

Subsequent events were shortly to provide grim reinforcement of Mr Charlton's perception. Between the fall of Singapore in February 1942 and the Battle of the Coral Sea in May 1942, almost the only units operating in defence of Australia were the Allied submarines operating out of Pearl Harbour and Fremantle.

From March 1942 until the end of the Second World War Fremantle was the home base for up to fifty Allied submarines (predominantly from the United States Navy, but also from the British Navy and the Dutch Navy from the latter half of 1944). The USN boats made up only one third of the United States Submarine Force in the Pacific (SUBPAC), but they sank more Japanese oil tankers (409,761 tons) than all of the remaining submarines in SUBPAC. Two of the Fremantle boats, *USS Flasher* (104,564 tons) and *USS Rasher* (99,901 tons) each sank more enemy shipping than any other Allied submarines in any theatre of war.

The Fremantle boats conducted in the order of 400 patrols and in addition to their successes against oil tankers and other merchant traffic, they also sank approximately 60 Japanese escorts.

To place these figures in context it is probably worth noting that the Allied strategy against the Japanese was to create a siege around the Japanese home islands, and that to conduct their war, the Japanese relied heavily on sea transport. In the upshot, by August 1945 the Japanese had lost virtually their entire merchant and Naval Fleets. 70% of those ships and submarines were sunk by Allied submarines and a third of those boats operated from Fremantle.

I think you will agree that Mr Charlton's opinion was more than justified by history.

TODAY'S GOVERNMENT'S VIEW

To continue my extract from Mr Beazley's speech to the Captain, Officers and Ships Company of *Otama* and their friends:

"The Government today shares Matthew Charlton's belief in Australia's ultimate ability — and its need — to defend itself. And it agrees that submarines . . . have a vital role to play, . . . with other forces in fulfilling that belief.

It would perhaps be premature to say that we have yet achieved the goal of a self-reliant defence posture so confidently set for us by that gentleman ("Mr Charlton") sixty three years ago.

But I have no doubt that by developing a hard hitting, indigenous submarine capability — perfectly exemplified by this boat, her crew and all who have worked on her weapons system — Australia has made a giant step toward that goal."

The six Oberon class submarines with which you will all be familiar are not Australia's first attempt at submarines.

AE1 AND AE2

Seventy five years ago when the first units of the Australian Fleet entered Sydney harbour two of their number were the submarines AE1 and AE2. Subsequently AE1 was lost early in the First World War on patrol to the north east of what was then German New Guinea. AE2 was the first Allied submarine to transit the Dardenelles. This not insignificant achievement has been overshadowed in Australian history by another activity involving many more Australians (and others) on the other side of the Gallipolli Peninsula. AE2 went through the Dardenelles on 25 April 1915.

Unfortunately, having penetrated the more difficult straits, the submarine then ran aground and was subsequently shelled and sunk.

The Fremantle area of Western Australia has supported successful submarine operations since World War Two. Pictured is a US Sturgeon class nuclear submarine visiting in 1985. An Australian Oberon class submarine will be base-ported at HMAS Stirling by the end of this decade.

Photograph courtesy RAN Public Relations

J BOATS

At the end of the First World War, Australia acquired six J class submarines which were based at Geelong, not far from where the Victorians intend to build tomorrow's new submarines. The J class did not stay long and in 1919 they were removed from the order of battle. The hulk of one the J boats is still to be seen on the southern beach of Swan Island in Port Phillip.

THE FIRST OXLEY AND OTWAY

Australia's third attempt at starting a submarine force took place at the time of the Great Depression. Two Oberon class (not the present Oberons) submarines, *Oxley* and *Otway* were obtained from the Royal Navy. They were to be stricken with engine trouble on their passage to Australia so that they spent several months in Malta rebuilding their engines. The present *Otway* has a ten centimetre high kangaroo made out of white metal from the bearings of the first *Otway's* defective engines.

Unfortunately, the first *HMAS Oxley* and *Otway* did not survive the economic climate of the period and were returned to the Royal Navy in the mid 1930s.

Both submarines were in commission in the Royal Navy at the start of the Second World War. *HMS Oxley* was sunk very early in the period by another Royal Navy submarine, because *Oxley* failed to return the appropriate (or indeed any) visual recognition signal when challenged by the other submarine. I understand that the sad irony is that the only survivor from *Oxley* was the signalman whose job it was to release the recognition flares, and that he reported that the flares were jammed by rust so that he could not release the necessary signal in response to the challenge they had received.

HMS Otway survived the Second World War. For the greater part of the war *Otway* was used for training submariners and ASW escorts. A large proportion of that time was devoted to the training of submarine officers to qualify for submarine command. This course is still conducted (and was the subject of a BBC TV programme which was shown by the ABC earlier this year). Legend has it that the course used to be known as "The Periscope Course" because submarine COs are supposed to have a very good "periscope eye". The course had, and still has, a fairly substantial failure rate which caused it to acquire the nickname "The Perisher".

A DECISION TO BUY THE NEW OBERONS

The decision which lead to Australia's fourth acquisition of submarines was made in the late fifties and early sixties. At that time the Royal Navy had a squadron of submarines based in Singapore (the Seventh Squadron — or SM 7 if one uses the jargon) and a smaller squadron in Sydney based at *HMAS Penguin* at Balmoral. This was the Fourth Squadron or SM 4. You will still meet people who become misty eyed when one mentions SM 7 or SM 4.

HISTORICAL CONTEXT

It is quite important to note the historical context of the decision because this perspective was to haunt the Australian submarine force to the present day.

UK WITHDRAWAL

The late fifties and early sixties marked the end of the British involvement in what they called the area "East of Suez". Although the final UK troop withdrawal did not take place until some time later, the Royal Navy warned the RAN that both SM 7 and SM 4 would be withdrawn and hence if Australia required the services of submarines they would have to get their own. The RAN relationship with the USN was not as well developed as it is now and in any case the USN was just starting out on its nuclear programme, so that if thought had been given to using USN submarines in place of the British boats the idea did not get far off the ground.

ASW ROLE FOR THE RAN

At that time the RAN saw its role as the provision of ASW escorts for convoys transiting to or from Australia. We had yet to face up to the reality of Mr Charlton's objective — that we should defend outselves. The Navy saw itself in a supporting function responding to the requirements of an Allied Commander in Chief such as the Commander in Chief Far East from the UK, or the Commander 7th Fleet USN or CINCPACFLT. There seemed to be little thought or effort given to strategic concepts or the requirement for maritime intelligence. Certainly, very few people in the RAN at that time had any idea of what the submarines in SM 7 were doing or why they were based in Singapore.

As a result the only peacetime role the RAN recognised for submarines, was the training of surface and air ASW forces. Hence it was for this reason — the provision of ASW training suppot to the surface fleet that the acquisition proceeded. Sadly, there are still Australian Naval Officers, and others, who believe that the provision of ASW training services is a valid occupation for Australia's submarines. This fundamental misconception has been the cause of more frustration and waste of effort than any other issue.

On the basis of this misunderstanding, the RAN went ahead and purchasing from the

United Kingdom first four and later two more of the most advanced and capable conventionally powered submarines then available in the world.

The Australians made some minor modifications to the UK designed Oberons which made them a little more comfortable. Subsequently the UK retrofitted the modifications in many of their boats. However, the Oberons effectively came from the same stable as the British Porpoise Class and the Soviet Foxtrot all of whom descended from the German type XXVII of 1943.

For those who haven't seen them, the Oberons are about 2000 tonnes, 32 metres long and 6 metres in diameter. Their crew usually comprises about 7 officers and 56 sailors. They are capable of sustained operations (up to six weeks) unsupported by any other unit.

SWUP

In their mid life each of the submarines undertook the Submarine Weapons Update Programme or SWUP as the jargon now has it. SWUP included an improved attack sonar, a very exotic submarine fire control system (SFCS) which helps solve the attack problem and provides guidance for the weapon, the US MK 48 torpedo and the Encapsulated Harpoon missile. SWUP changed a comparatively aged but capable submarine into one of the most capable units at sea in the region.

Unfortunately, SWUP could do nothing about the age of the pressure hull or the poor reliability of the engines. The fundamental misconception also haunted SWUP. While weapon system improvements were justified and acquired on the basis of the primary war time role — to sink the enemy — a number of essential sensors necessary for peacetime surveillance have yet to be acquired. After all if all the submarines do in peacetime is provide services for ASW training, why is any surveillance system necessary?

SUBMARINE MANPOWER

The other improvement which is still a long time coming is the provision of adequate submarine manpower. In my experience it has been a continuous struggle to ensure that the submarine force is adequately manned. The quick answer has always been that there are no volunteers — but while I was serving I did not visit any surface ship or naval establishment without being asked by at least one sailor and one officer — "why won't 'they' let me into the submarine force? I have volunteered on many occasions and I have heard nothing." My subsequent investigations at Navy Office indicated that all too often the volunteer was a very capable junior officer or sailor who was far too important to his present ship to be released for submarine training. This is probably the worst effect of the fundamental misconception I identified earlier. Why should valuable manpower be wasted in an organisation which only provides support for the operational units of the Fleet.

I understand that this practise is now well and truly dead and that submarine manpower levels are satisfactory.

SUBMARINE OPERATIONS

It is probably appropriate to talk about the nature of Australian submarine operations.

In peacetime the primary role of the submarine is to gather information, to undertake surveillance. It also has a number of secondary roles, the most important of which is to train itself and then to assist in the training of other submarines. ASW training for surface and air units is a very minor role which can be undertaken by simulators.

Submarine surveillance operations are ideally covert. They are controlled from the headquarters of the submarine operating authority using the VLF broadcast from North West Cape. The effective submarine is not detected at any time during its operation, and operates under radio silence. These constraints place very stringent demands upon the material state of the submarine, the fitness and professionalism of its crew, the professionalism of its supporting organisations such as the submarine operating authority and the submarine base and the administration of the submarine force.

COVERT DETERRENCE

As the Minister for Defence pointed out, one of the main roles of the submarine force is to deter the would be enemy. It is appropriate at this point to consider the concept of covert deterrence. While it is argued in some quarters that in order to be effective, deterrence can not be covert, the well armed, professionally and covertly operated conventional submarine can and does have a significant deterrent effect.

Consider the position of the government of a country who might wish to attack Australia. The foreign government must consider what damage is likely to occur to its own forces. "Is Australia worth the damage the foreign power might have to incur?" Part of this equation will be the capability of the Australian submarines, against whom some effort will have to be invested. Another part of the sum will be the location of all of the Australian submarines — what damage will be incurred if the foreign power elects to ignore the locations of the submarines; how

much effort must be expended to ensure the location of each of the submarines is known; what increases must the foreign power make to its present capability before it can proceed?

In the best case the would be aggressor is convinced that the harm to him will be greater than the benefit possibly available if the engagement is successful. In the worst case, the would be aggressor is forced to embark upon an arms acquisition programme which effectively "telegraphs his punch" thereby giving Australia notice of its intent.

This is the concept of covert deterrence.

THE PEACETIME ROLE OF THE SUBMARINE FORCE

As Australia has gained in experience in operating submarines, so we have moved closer to achieving Mr Charlton's goal. At the same time the British have withdrawn to become interested only in Europe and the Atlantic and President Nixon announced what has become known as the Guam doctrine.

Our major Allies have indicated that they expect us to defend ourselves, regardless of our perceptions of ourselves.

de Facto the peacetime roles of the submarine force have become:

— surveillance,
— deterrence, and
— training of the submarine force for war and to meet the two principle peacetime roles.

Even if ASW training of surface forces was a desirable goal, which it is not, there is no longer time available for the activity. In fact the worm has turned, because now there is a heavy demand upon the surface fleet to provide targets for the submarines to maintain their skills.

OBERON END OF LIFE

However, the Oberons will reach their end of life in the early 1990s and as a result they will be replaced by the proposed New Construction Submarine. That this project has received such wide and enthusiastic support is indication that the perspectives of submarines in Australia held by Mr Charlton and Mr Beazley are shared by a reasonable proportion of the community.

THE NEW SUBMARINE

Two competing submarine builders and two competing submarine combat system manufacturers have submitted to the Commonwealth their proposals for how they would (if selected) construct Australia's new submarines.

The award of the New Construction Submarine contract in July 1987 will be the culmination of some two years of very intensive work on the part of four overseas companies and some very intensive lobbying by Australian industry and each of the states.

The companies who are participating include:

— Ingenur Kontor Lubeck (IKL), a leading designer of conventional submarines in the world today, from the Federal Republic of Germany (FRG).
— Howaldste Werke Deutsche Werft (HDW), a submarine and ship builder from Kiel in FRG.
— Ferrostaal, also a FRG company.
— This group of German companies are joined by the Australian company Eglo Engineering.

The German group have been flying under the banner of the "Type 2000 Group", but will be known as Australian Marine Systems Pty Ltd (AMS).

They are opposed in their bid to build the submarines by a group lead by the Swedish company KOCKUMS from Malmo in southern Sweden. This group comprises:

— KOCKUMS — a leading submarine designer and manufacturer.
— Wormalds — an Australian company.
— Chicago Bridge & Iron (CBI) — a heavy engineering company from USA, and
— the Australian Industry Development Corporation (AIDC).

This group is operating under the title of "The Australian Submarine Corporation" (ASC).

There are also two submarine 'combat system' houses competing against each other. These companies will provide what we might recall as the fire control equipment. However, I can assure you that the new submarine's combat system will be a very modern device with far greater capability than we have seen at sea before.

The two combat system groups are:

— Rockwell International from the United States who are working with Singer Librascope, another US company, Thompson Sintra, a French group, and Computer Sciences of Australia (CSA).
— Hollandse Signaal (known colloquially as Signaal), a company from the Netherlands which is part of the Philips group. Signaal is working with three Australian companies — Thorne EMI, AWA, and C^3.

There are no special arrangements between the submarine builders and the combat system houses. By that I mean that each of the builders must be prepared to work with either of the combat system houses and vice versa.

THE SUBMARINES

The submarines will be conventionally powered. That is they will be driven by a very large battery which is charged from time to time by diesel engines which drive generators. Battery charging is normally conducted dived via a process known as snorting. The ratio of time spent snorting (and therefore exposing ones masts to the risk of detection) over the total time underway is known in the trade as the "indiscretion ratio".

For those of you who may have some popular misconceptions about submarine officers the objective is to ensure that the submarine is as discreet as possible.

THEIR WEAPONS

They will be armed with the Mark 48 Torpedo, a US design and manufacture, which is wire guided, has both passive and active homing and can travel quite a distance very quickly. Its warhead is a conventional explosive equivalent to about two tonnes of TNT. The torpedo is effective against other submarines as well as surface ships.

The submarines will also be armed with the Harpoon Missile. Indeed the Oberons are carrying these weapons at sea now. The first Harpoon was fired from an Australian submarine in late 1985. The results were notably better than the USN submarine force have been achieving, which says something for the Oberon combat system and therefore the base from which we are stepping off to develop the new combat system.

The Australian Submarine Warfare Systems Centre (or SWSC as it is known in the trade) at South Head in Sydney Harbour is recognised as a world leader in its field.

OTHER OPERATIONAL CAPABILITIES

One of the facts of maritime life in the Australian region is the vast distances that need to be covered. In the case of the new submarines this feature has manifested itself in the requirement for very long range. The new boats will be required to remain in their patrol areas for periods in excess of fifty days. As you might imagine we are not going to discuss the location of those patrol areas in this forum, but you can be assured that they are quite some distance away.

It will be important that each boat is able to deploy a full range of sensors. As a result the Naval Staff Reqirement for the new boats is very demanding in this area. Passive sonar continues to be a very profitable sensor and it has been improved with the advent of the towed array. This moves the hydrophones well away from the submarine, thereby eliminating the effects that ones own ships noise might have in blanking the quieter target. Ideally these submarines will be fitted with a reelable towed array which will allow much greater tactical flexibility, particularly in shallow water.

Other sensors such as ESM (detection of target radio and radar emissions) and two periscopes will complement this sensor suite.

For the navigators among us, morning stars at O Crack will not be the miserable experience for tomorrows young officers as it was for us. They will be provided with a very impressive navigational suite.

All round the new submarine should weigh in at just under 3000 tonnes. It should be the most capable conventional submarine in the world.

TIME SCALE

The Navy project team, assisted by a large proportion of the rest of the Navy in Canberra, are already well into the evaluation process. They concluded the initial tender evaluation in late December 1986 and the evaluation should be completed in May 1987.

From that point their recommendations will be passed through the various Defence Committees. Ideally, the Committees will endorse the evaluation recommendation by the end of June, 1987.

The Chief of Defence Force and the Secretary will pass that recommendation to the Minister for Defence who will present the recommendation first to the ALP Caucus and then to the Cabinet. Mr Beazley has said that he wishes to announce the successful contractors in July 1987.

SOME COMMENTS

There is no doubt that it is a very brisk programme. It is made even more challenging by the absence of any senior submarine officers in the programme. As a result not only could there be some bureaucratic wrangles; there may well also be an ongoing education programme as senior officers and public services are provided with submarine training.

RISK

Perhaps the greatest opportunity for the project to be frustrated in its goals will be in the area of risk management (and therefore risk avoidance). It would be foolish to suggest that there is no risk associated with the New Submarine Project, although I regard technical risk as the least of all the risk categories. It is a natural process for people to seek to avoid risk, and in the case of the submarine project, the desire to avoid risk

may manifest itself in some of the following ways:

— The formation of committees so that no one person can be held responsible for a risk association decision.
— Procrastination in the committees while the members hold out for the anonymity of unanimity.
— Fragmentation of the project to reduce financial risk.
— Impossibly high demands placed upon the contractor to warrant their product, no matter what.
— Fragmentation of the contract negotiation process so that the contractor never quite knows who or what he is dealing with.

PRODUCT WARRANTY

If the Defence Department has demanded a very high level of warranty from the contractor, we can expect the contractor to include in his price a very high premium in order to protect himself from the bureaucratic risk of dealing with the Commonwealth and to ensure that he can survive the warranty requirements.

REDUCTION OF PROJECT COSTS

In the event that the Defence Department finds itself faced with some very high costs proposed for the New Submarine Project, one hopes that it would avoid the usual method of reducing project costs, i.e. by reducing operational capability or cutting out the training element. Instead in this project it may be possible to make savings by reducing the contractor's obligation to warrant his project. Or more accurately — accepting an appropriate share of the responsibility to warrant the product.

A STATUTORY AUTHORITY

Steps must also be taken to minimise the bureaucratic risk in the project. The way in which governments have managed major projects most effectively has been to establish statutory authorities. Models which spring to mind are the Tennessee Valley Authority in USA and the Snowy Mountains Authority in Australia. There are also some very good models within the defence community such as Rickover's nuclear programme in USA and the UK Polaris Executive.

The New Construction Submarine Project is a significant project which has the potential to make a contribution in many areas of Australian industry. If we are to get the full benefit from the project it is worthy in my view, of the dedicated attention of a small but reasonably autonomous statutory authority.

THE ROLE OF THE STATUTORY AUTHORITY

The authority should participate in the final stages of the Project Definition Study evaluation, observe the committee decisions, be charged with contract negotiations with the successful tenderers and then undertake total management of the project. The authority should have the autonomy to control the configuration management and it should have complete financial control with the latitude to vary the financial arrangements with the contractor/s, provided it remains within the total project cost. Ideally, the authority manager should enjoy the same latitude as the Managing Director of a private company, and he/she should be an entrepreneur. The authority would be responsible to the Minister for Defence for the delivery of the submarines by an agreed date.

CONCLUSION

I hope it will be agreed that Australia's submarines are worth our tax dollar and that we are getting our money's worth. I am sure that we are taking some very sound and appropriate steps towards Matthew Charlton's goal. The submarine force has moved from the status of a group of "clock work mice" to become the principle maritime deterrent force. It is now conducting effective surveillance. It is supported by highly professional people — in my view the best submariners in the world — and they are employing some of the most advanced technology in the country. Furthermore, we are moving towards one of the most exciting major defence projects Australia has seen, which should be the impetus to a genuine defence industry capability.

WASHINGTON NOTES

by Tom Friedmann

Prior to the release of the Tower Committee Report on "Irangate," I was listening to a news report that which said that there was a delay in issuing the Report because of problems with security clearance. I remember thinking to myself, "What could be left that is secret?". Only the American public, it seemed, was not to have access to American secrets.

First, the only FBI agent ever "turned" by a foreign government was convicted of espionage. Then it was discovered that the Walker family had done "irreparable harm" to the country through their sale of naval secrets to the Soviets. Marine guards have been accused of allowing the KGB free run of our Moscow embassy. And, of course, there is the case of Jonathan Pollard, Israel's master spy in the United States.

Pollard, an American of Jewish faith, sold thousands of pages of classified American documents to the Israelis in the belief, he said, that the United States was not providing enough information to its close ally, Israel. He was also paid $2,500 a month, received paid vacations in Europe for himself and his wife, and was promised a future nest egg of $300,000 to be placed in his Swiss bank account. American prosecutors called Pollard the most damaging spy in American history.

Israel's decision to spy on the United States and the response of the Israeli government once Pollard was caught can only be termed idiotic and arrogant. "What began in stupidity quickly sank into irresponsibility," said Nathan Perlmutter, national director of the B'nai Brith Anti-Defamation League. The idiocy was compounded by moving one of Pollard's "handlers" in this "rogue" operation from intelligence work to the chairmanship of Israel Chemicals Ltd., the country's largest state-run company; and one (who now is under indictment in the United States) to command of Israel's second largest air base.

Jewish Americans have been particularly affected by the Pollard affair. Many, observes William Raspberry in *The Washington Post*, are feeling the anguish of being forced to choose between America and Israel. The virtually unanimous choice, as Raspberry notes, has been for America. This choice surprised many Israelies, including many in the Israeli government. That it should have surprised them is the fault of the American Jewish community for not demanding a better knowledge, understanding, and appreciation of that community's position in the framework of American life and how that position was achieved.

To put it simply, Jewish Americans fought for their position in American society like most other religious and ethnic groups. The Constitution of the United States prohibits religious tests for holding Federal office and guarantees the freedom of religion to all of its citizens. However, the Constitution was almost a century and a half old before the Supreme Court interpreted it to apply the Constitution's guarantee of religious liberty to the states. Thus, Pennsylvania limited office holding to Christians and New Jersey and North Carolina limited it to Protestants. Full equality for Jewish citizens did not come to Maryland until 1826 and North Carolina until 1868.

Early Jewish appointees at the Military and Naval Academies were ostracized by their fellows because of their religious beliefs. Jewish naval officers were investigated for "loyalty" during World War I by Naval Intelligence for what later historians have concluded was no other reason than their religious beliefs. It is interesting to note that, at the same time, a Jew, Sir Joh Monash, was commanding Australia's forces on the Western Front.

Restrictions on the number of Jewish students to be admitted were in effect at many of the nation's universities until the 1950s and I can personally attest to the hurt one feels when law firms and social organizations refuse entry due to religious belief.

But parallel to these blots on America's record, a society has developed that has permitted citizens of the Jewish faith to partake in all facets of public life. Even before ratification of the Federal Constitution, several states had made provision for the full participation of their Jewish citizens in public life.

As early as 1703, Jews of South Carolina voted for the first time in a general election. Thomas Jefferson's Virginia Statute on Religious

Freedom preceded the Federal Constitution by two years and the Federal Bill of Rights by five years. New York, Georgia, South Carolina, and Pennsylvania enacted legislation similar to that of Virginia and, eventually, all states acted to protect the religious rights of their citizens.

Jews now worship freely and without fear of molestation. No livelihood has been prohibited by statute as happened so often in Europe, no ghettos for residence established. No police or army have come to kill, rape and plunder in the night.

And so Jewish Americans have lived in increasing peace and security since colonial times. They have forged political alliances and personal and professional relationships with non-Jews that have helped secure and expand their political rights and social acceptance. The social revolution that has taken place since the end of World War II has accelerated that process. Anti-Semitism, while remaining a fact of American life, no longer plays a major role in that life.

In order to understand Israel's importance to Jews throughout the world, it is imperative to try to understand the effect of the Holocaust on them. German Jews were citizens of one of the most civilized and cultured countries in the western world and were even more assimilated into the general population than were American Jews. Hitler decimated the Jewish population of Europe. His madness forever changed the perception of Jewish Americans of themselves, their country, and the world around them.

At first, Jewish Americans hesitated to support the emigration of their fellow Jews from Germany for fear of fanning the fires of anti-Semitism in the United States as much as for the belief that the Nazi outrages would pass. The Great Depression and the rise of facism infected the body politic with a particularly virulent strain of anti-Semitism. Lead by Father Charles E. Coughlin, the Detroit "radio priest," and Henry Ford, the automobile magnate, anti-Semitic material was distributed that was every bit as degenerate as that which spewed forth from the Ministry of Propaganda in Berlin.

But even when hesitant steps were taken to help relieve the suffering in Europe, Jewish Americans found themselves unable to influence the American political system. Thus, when entry visas were sought for 5,000 German Jewish children in 1938, legislation died in congressional committees. Organizations such as the American Legion and the Daughters of the American Revolution were vocal in their opposition. A year later, however, room was found for 5,000 children who were evacuated from the United Kingdom.

Similarly, when, the German liner *St. Louis* with 900 Jewish refugees on board was refused entry into the territorial waters of the United States. Many of the refugees, who were later landed in several European countries, died in Nazi concentration camps. John Toland, a Hitler biographer, says that this refusal by the United States to shelter Jewish refugees convinced Hitler that the West would acquiesce in his "Final Solution".

During World War II, the American government and the governments of the other western democracies stood virtually mute in the face of mass exterminations. Recent disclosures that American military authorities refused to bomb the death camps and later, because of their pathological fear of the "communist conspiracy", employed and then aided in the escape of known Nazis such as Klaus Barbie, were bitter pills to swallow even four decades after the events in question.

The Holocaust shook the world Jewish population as nothing had since the Spanish Inquisition. For its survivors, the necessity for a Jewish state was no longer an abstract idea but a necessity. Jews were — and are — bound by a simple oath: *"Never again!"* American Jews were determined to fulfill that oath by taking the place in American life, and particularly in American political life, that was rightfully theirs. Israel became a prime recipient of the largess stemming from this new assertiveness.

The founding of Israel and the flowering of the Jewish American community have thus coincided, with Israel becoming the recipient of one of the most, if not the most, powerful and sustained lobbying efforts in Washington. This effort is, in a word, awesome.

The lobbying effort is imperative to Israel's survival. And the ability of the Israelis to get whatever they need from the American government is breathtaking to behold. In embassies all around Washington (Australia's included) heads shake in disbelief at the almost unfailing support Israel receives diplomatically as well as economically and militarily to the tune of *$3 billion* a year in governmental aid and *$500 million* a year from private philanthropic sources.

Other national and ethnic groups in the United Stated may be more numerous and have the same opportunities to petition the government but no other group has organized as has the American Jewish community in Israel's behalf. When discussing this with an Irish American friend recently, he asked why I thought this had come about. I said because it had to be. Six million deaths demanded it.

The Pollard affair has brought unparalleled public condemnation of Israel from Jewish

American leaders. Their traditional policy of showing solidarity with Israel in public while remonstrating its leaders in private was simply inapplicable in this case. Israeli response to this well deserved criticism has been as astounding as it has been insulting:

- Shlomo Avineri, a Hebrew University political scientist, likened the response of some American Jews to the Pollard affair to that of French Jews who reacted to the Dreyfuss affair by "falling over each other" to renounce a fellow Jew.

  "Let me not mince words," wrote Avineri. "Some of the responses of American Jewish leaders after Pollard's sentencing reminds me of the way in which Jewish leaders in Egypt under (President Gamal Abdel) Nasser and in Iran under (Ayatollah Ruhollah) Khomeini ran for cover when members of their respective Jewish communities were caught spying for Israel."
- An unnamed Israeli government official asked who American Jewish leaders were trying to impress. ("T)hey . . . spit on us when we're in trouble because they want to be in good with the United States government."
- "Israel must remain firm and need not bow to pressure of any kind," said Industry and Trade Minister Ariel Sharon.

"We've been on the battlefront too long for Israel . . . for anyone to throw that crap at us," responded Hyman Bookbinder, recently retired senior lobbyist for the American Jewish Committee. "The whole affair shows a real lack of sympathy and understanding, even contempt, for what it means to be an American Jew," says Levi Weiman-Kelman, an American rabbi living in Israel.

Sharon and others of his ilk should be reminded that Israel is totally dependent on American aid, aid that comes from all Americans, not just Jewish Americans. If they do like the situation, let them put Israel's economic house in order and cut the umbilical cord. As it stands, Israel is rapidly passing from the status of independent ally to client state, where requests from American administrations, such as for assistance in Nicaragua and Iran, cannot be refused. Indeed, Israel is in danger of becoming American's Cuba.

Israelis seem to have forgotton that for the first two decades of their existence, they received only modest amounts of American economic aid and no American military aid. Only when France refused to *sell* Israel more sophisticated weapons during the Six Day War of June, 1967, were the doors of America's arsenal opened to Israel. This aid, despite a belief in some circles in the United States and Israel, could be as easily turned off as it was turned on.

Israel not only spied on a friend, it spied on its most vital friend. Israel's political support in the United States is multi-racial, multi-ethnic, and bi-partisan with some of its most passionate advocates in Congress coming from districts with little or no Jewish population. America's relationship with Israel is based on what is perceived to be America's self-interest. That "special relationship" could be called into question if that perception ever changes.

American-Israeli relations over the last several years have been riddled with disputes over many of Israel's actions, such as its West Bank settlement policy, the annexation of the Golan Heights, the misuse of American armaments, and the Lebanon invasion. Lurking as possible sources of future problems are Israel's role in the supply of arms to Iran and its economic and military ties to South Africa. The Pollard case, says Bookbinder, adds another corrosive factor to the relationship.

"Nothing Israel conceivably could learn from the Pollard operation could be worth the risk of eroding the American alliance on which Israel's future depends," said a recent editorial in *The Kansas City Star*. "Jewish Americans," who contribute enormously to the strength and welfare of Israel, are trying to explain that to Jerusalam. If the Israelis listen and understand, they will be acting to reverse the estrangement, and in the interest of true security".

In 1790, the Jews of Newport, Rhode Island, sent a letter of congratulations to President George Washington on his assumption of office. Washington responded in words that have become virtually sacred to Jewish Americans:

> It is now no more that toleration is spoken of, as if it was by the indulgence of one class of people that another enjoyed the exercise of their inherent natural rights. For happily, the government of the United States, which gives to bigotry no sanction, to persecution no assistance, requires only that they who live under its protection should demean themselves as good citizens, giving it on all occasions their effectual support.

Washington's words are the ideal and for two centuries Jewish Americans have sought to make the reality of life more like that ideal. In the process of creating their "land of milk and honey," they have won the respect of their fellow citizens and a voice in their country's corridors of power. That voice has been frequently raised on behalf of Israel which has become dependent on the largess of *all* Americans. No American deserved a Pollard affair.

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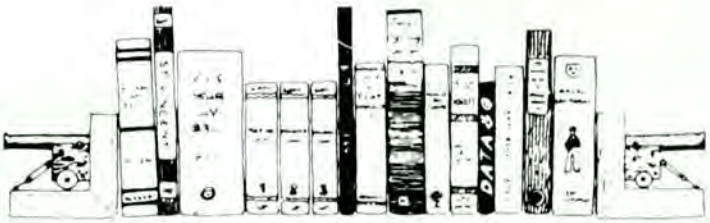

THE ANZUS ALLIANCE AND NEW ZEALAND LABOUR (Michael McKinley, Canberra Studies in World Affairs No. 20, Department of International Relations, Research School of Pacific Studies, ANU, Canberra, 1986)

This slim volume appears as a timely contribution to the debate over the New Zealand Government's anti-nuclear stance and the author has produced a coherent and well written study of the current situation.

Michael McKinley sounds a strongly theological note in his observations of the behaviour of the New Zealand Government. There are, indeed, certain parallels between Mr Lange's advocacy of the anti-nuclear case and Martin Luther's earlier attempts at enunciating protestant theses such as justification by faith alone. The principal analogy is that, however valid either doctrine might be by itself, each author gave little thought to the disruption of the social fabric which publication might cause.

And this idea is a recurrent one in McKinley's narrative. The writer himself, as he declares in his foreword, has the aim of being critical and provoking discussion. He has succeeded in making apparent the contradictions not only within the policies being pursued by New Zealand but in the attitudes of Australia and the United States to the New Zealand question. There is in it all a hint of *1066 And All That*. If the answer is likely to be found, the New Zealanders may well change the question.

McKinley's critical analysis is occasionally perceptive at the expense of a clear statement of his own opinions but there is no doubt that this study does us all a service in its delineation of the real issues. The true coincidence of Australian and New Zealand interests has been the subject of a great deal of woolly thinking and does require re-examination and clear enunciation. While McKinley is perhaps over-hasty in his discounting of the New Zealand Defence Force's capabilities, he has a point when he implies that not too much can ever be expected of New Zealand by that country's allies.

Perhaps the most telling point in the study is the record of poll results which would suggest that the popular commitment in New Zealand to what would be regarded as wider issues of western defence is by no means certain and that the defence issue is unlikely to be an election winner for the Opposition. While the latter have yet to think out and produce a comprehensible defence policy there can be no certainty that one responsive to the electorate will return New Zealand to the fold.

Perhaps a question which still requires examination, particularly since it has implications for all the western countries, is the extent to which the education system and events of the last decade in general have altered the preconceptions amongst the electorate which have hitherto served as a foundation for "agreed" defence policy. Ignorance is bliss. There is no doubt that the memories of old wars and old fears, even where Vietnam is concerned, are fading and their totem effect disappearing. What popular myths are moving into the minds they have vacated?

James Goldrick

THE COFFIN BOATS — JAPANESE MIDGET SUBMARINE OPERATIONS IN THE SECOND WORLD WAR, by Peggy Warner and Sadao Seno. Published by Leo Cooper in association with Secker and Warburg Ltd. 206 pages, Cost: $30 (approx). Distributed in Australia by Heinemann.

The entry of Japan into World War Two introduced Australians to an enemy who was perceived to demonstrate an unorthodox attitude towards style of combat and conduct of military operations. While Australian Servicemen adapted to playing an active part in several theatres of conflict, the majority of the Australian public only very gradually become aware of the impact of the Japanese advance and were scarcely prepared for the arrival of the enemy close at hand.

Peggy Warner and Commander Sadao Seno, JMSOF (Retd) have combined their talents to give a dramatic account of Japanese midget submarine operations in World War Two. The first impression gained when reading the intriguing title 'The Coffin Boats' is a sense of urgency to quickly read and absorb the details of a still largely misunderstood phase of naval history.

Three midget submarine raids are described in full detail in the book, one of which is that prosecuted so near to one of our international landmarks, the Sydney Harbour Bridge, at the end of May 1942. Australians who lived through this period of uncertainty may desire to bolster their own reminiscences with the well researched account in the book. Younger Australians can profit not only from the historic aspects of the raid but also the studies of the personal behaviour of people involved in the event. A strong point of the book is that it gives a balanced view of midget submarine operations from 'friend and foe' alike. In fact, Commander Seno commanded a midget submarine during the latter stages of the war.

Australians find it all but impossible to identify with the mindset of fanatically dedicated midget submarine crews trained to participate in suicide missions. But Japan was a nation commited to a course based on worship of an Emperor and a deity combined as one. Without this dogmatic adherence to a deeply instilled creed the manner of Japanese participation in the war would certainly have been very different.

The 'Coffin Boats' gives a reminder through both Western and Eastern eyes of this unfamiliar, 'kamikaze' outlook which was largely responsible for the initial heavy Allied losses, though many years of planning and preparation for the Pacific war gave the Japanese a huge advantage in their thrust southward also. The unique nature of midget submarine operations including pre-training and test runs is well brought out in the book. So too is the Allied and Australian reaction to the surprise attacks and the complex Japanese mental attitude which was behind the attacks.

Another point brought out in the book is the subtler side of the Japanese concept of warmaking. Prior to the war the presence of Japanese merchant sailors photographing everything in sight in all our ports, large or small, was looked on as somewhat humourous, but later was recognised to be espionage and could well have been used against us with disastrous results. The Japanese spent years surreptitiously gathering war intelligence while much of the rest of the world considered them a primitive race because of their tendency to keep to themselves and not adopt Western practices. They were basically considered a second rate power in most respects prior to the outbreak of war.

The 'Coffin Boats' emphasises such misperceptions and cleverly places ensuring wartime events into a personal touch to the various individual activities described and bring about a greater understanding of how participants on both sides were inspired. This is especially the case for the almost certainly doomed crews of the midget submarines during their fateful missions.

I enjoyed reading 'The Coffin Boats' during my Easter Break and recommend it as an interesting and informative work.

Syd West

PETER MITCHELL TRUST ESSAY COMPETITION — 1987

In concert with the increased recognition being given by the Australian Government to the role of the Reserves in the defence of Australia, the title chosen for the 1987 Peter Mitchell Trust Essay Competition is:

'The use of Reserves in Both Peace and War.'

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- Officers on Staff Course Section — prizes of $1000, $500 and $250.

The details for the competition are contained in DI(N) PERS 51-1. Further information can be obtained from Commander Angus Cameron on (062) 65 3366.

The closing date for the 1987 Competition is 31 October 1987.

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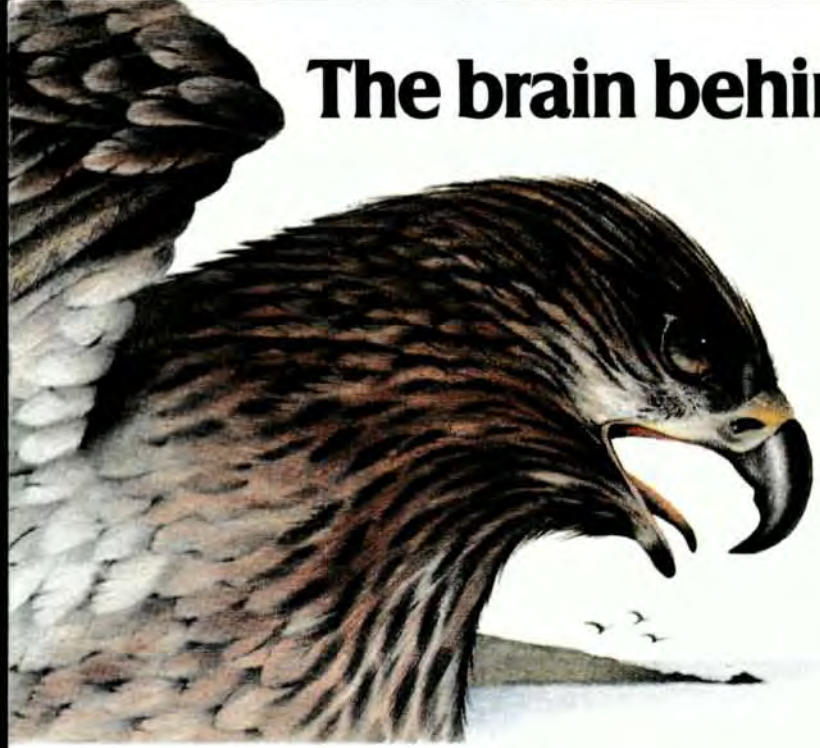

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