Journal of the Australian Naval Institute



AUSTRALIAN NAVAL INSTITUTE

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

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

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Front Cover: Coalition RHIBS embarked in HMAS Kanimbla (RAN)

Back Cover: HMA Ships Kanimbla and Darwin deployed to Operation Falconer (RAN)

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ANI LIBRARY

The ANI library is located in new premises at Campbell Park Offices (CP4-1-039). The collection, which numbers several hundred books on naval history and strategy, and more general defence matters is being managed by the Sea Power Centre-Australia on the ANI's behalf. By combining resources with the Sea Power Centre's own reference collection, ANI members now have access to an unrivalled and often unique selection of research material. The library is normally available for use 0900-1630 each weekday, but please ring to confirm this before your arrival, particularly if visiting from outside Canberra. As this is a reference collection, it is not possible to borrow the books. Contact is Mr Joe Straczek on (02) 62662641 or jozef.straczek@defence.gov.au.

The Institute will gladly accept book donations on naval and maritime matters (where they will either be added to the library or traded for difficult to obtain books). Inquiries should be made to:

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FROM THE EDITORIAL BOARD

The Editorial Board seeks articles on naval or maritime issues for publication in the *Journal*. Articles may range in size from a few pages to 10+ pages - anything larger should be submitted to the Sea Power Centre-Australia for possible publication as a Working Paper (spea.seapower@defence.gov.au). Articles concerning operations or administration/policy are of particular interest but we will consider papers on any relevant topic. As much of the RAN's operational and administrative history is poorly recorded, the recollections of members (and others) on these topics are keenly sought.

Back copies of the *Journal* (where held) cost \$5 for members and \$15 for non-members. The Institute will take back old copies of the *Journal* if members no longer wish to hold them.

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One of the purposes of the Australian Naval Institute is to encourage a vigorous, robust debate about naval and maritime matters. The *Journal of the Australian Naval Institute* is one of the primary vehicles within the Institute for this debate to take place. The introduction of pen names is a way for all members to more actively enter into and improve the quality of debate within the *Journal*.

If a member wished to publish under a pen name the Editor must be advised either in person or in writing of the identity of the individual that wishes to use the pen name. The Editor will confirm in writing to the member seeking to use a pen name that the name has been registered and can be used.

The Council of the Institute has endorsed the following conditions on the use of pen names:

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 identity of the author to any member of the Institute other than for reasons required by law.
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The Editor is available to assist in the development of a suitable pen name.

ANI Press Book Sale

The Australian Naval Institute has a number of copies of the following books available for sale @\$12.50 each (includes postage). If you wish to purchase copies, please contact the Institute's Business Manager.

Military Strategy: A General Theory of Power Control

by RADM J.C. Wylie, USN 1967, softcover, 111 pp.

The basis of this book is the author's belief that current thinking on strategy is superficial and inadequate and he therefore proposes a general theory of strategy to better reflect planning for war. Wylie believes that previous well known strategists have concentrated on the detailed specifics of war, rather than on why wars are managed the way they are.



Wylie believes there are three strategic theories currently in use, with one newly emergent: continentalist, maritime, air and national liberation. Importantly he sees them as being single-Service oriented (as they probably were at the time); and thus having limitations as overall strategies for war (albeit with Mao's theory being the most sophisticated strategy). Given his assessed limitations of current strategies, Wylie proposes a general theory based on four assumptions: despite whatever effort there may be to prevent it, there may be war; the aim of war is some measure of control over the enemy; we cannot predict with certainty the pattern of the war for which we prepare ourselves; and the ultimate determination in war is the man on the scene with a gun. His general theory is then based on the following theme: the primary aim of the strategist in the conduct of war is some selected degree of control of the enemy for the strategist's own purpose; this is achieved by control of the pattern of war; and this control of the pattern of war is had by manipulation of the centre of gravity of war to the advantage of the strategist and the disadvantage of the opponent. While some of the ideas in the book are dated, it does provide concise explanations of current strategies that would be useful to staff college students.

A Few Memories of Sir Victor Smith

1992, softcover, 64 pp.

The basis of this book is a number of interviews with VAT Smith about his nearly 49 years of naval service with the RAN: from a 13 year old cadet midshipman at the RAN College in the mid-late 1920s, service with the Royal Navy in WWII, various high level positions culminating in his appointment firstly as the Chief of Naval Staff and then as the Chairman of the Chiefs of Staff Committee. His recollections of life as Cadet at the Naval College are fascinating, as well as his various specialist courses undertaken in the UK with the RN. Combined with service aboard HMA Ships *Australia* and *Canberra*, these recollections, while being interesting history, provide a basis for comparison with training today.



Admiral Smith is widely recognised as the father of the Fleet Air Arm and it is no surprise that he devotes a lot of space to naval aviation. Originally trained as an observer, Admiral Smith flew in *Swordfish* torpedo bombers and *Fulmer* fighters in the Atlantic at the beginning of WWII, taking part in an attack on the *Scharhorst* in 1939. At the end of WWII, Smith was tasked with drafting a plan for the RAN Fleet Air Arm, a project that helped set up the Fleet Air Arm that exists today.

Smith's description of the post war RAN provides us with an interesting perspective on the development of the RAN during this period, especially in the period from the mid-1960's to the mid 1970's.

A Maritime Focus - The Future Strategic Challenge for Australia

by Captain Richard Menhinick, CSC RAN

Australia is located in one of the most complex open ocean, littoral and archipelagic maritime regions in the world. The sea is the defining physical characteristic in the region. The overwhelming significance of this is that the Australian mainland has no land borders; this is a strategic advantage that needs to be understood in the future to avoid it becoming a strategic liability.

Australia's maritime status is an enduring strategic reality. There are many more effective ways to influence or overcome Australia other than via a military invasion. Indeed even in a narrow military sense Australia's strategic interests are not restricted to the sea-air gap to the north of the continent. However, defence against such invasion through the maritime approaches has since 1986 been the prime force structure determinant in Australian defence planning. As an alternative to this, Australia now has the opportunity to appreciate that a mature maritime capability can provide the mobility and power projection capability to deter aggressors engaged in operations against Australia's interests at a distance from Australia itself. Such an understanding would lead to the implementation of a credible maritime strategy.

The future strategic challenge for Australia is one that focuses on sea control as the basis for the defence of Australia, which includes its broader interests. Sea control is a basic prerequisite for protection of trade and the projection of power ashore from the sea. A maritime strategy has an emphasis on manoeuvrist, not attrition based, warfare and operations across the continuum of conflict in a location of Australia's choosing and not on the mainland of Australia or its direct approaches.

Notwithstanding the success of the 1999 East Timor operation, Australia's ability to project national power in support of Government policy, in a situation where Australian forces are actively opposed, may be constrained by a maritime capability that is orientated more towards sea denial² operations rather than sea control. To rectify this, future force structure development should reflect the fact that in an era of uncertainty Australia may well need to

project force through the maritime environment. This re-emphasises a maritime strategic approach for Australia.

Broadly speaking, in support of a maritime strategic approach, Australia's national interests are in reality integrated with the environment beyond the coast and need to be expressed in terms other than purely war or peace but as part of a spectrum of conflict with many overlaps. Defending interests is more than defence of national borders, and except for distance, the sea removes impediments for the projection of power and the defence against attacks on interests. A strategic approach that emphasises a continuum with many overlaps, is something very relevant to maritime forces because they interact constantly with various points on the spectrum. One of the central features of a maritime strategy is that it has an application throughout the continuum of operations. What this means is that benign operations are just as relevant to a comprehensive maritime strategy as combat operations and that maritime strategy has a well defined peacetime dimension.

Technology and social geography is important for Australia. Australia exists in a region of instability and significant military spending. Although a western liberal-style democracy, it cannot assume that there is no threat to its national survival over the longer The German strategist Carl von Clausewitz in avoiding what he termed 'abstruse definitions of war' wrote in 1832 that: war is ...an act of violence intended to compel our opponent to fulfil our will.3 However, in the chapter that he dedicates to defining what is war, Clausewitz moves from this narrow definition to describe war as a political instrument, a continuation of political commerce. The statement that war is a mere continuation of policy by other means⁴ is important, as Australia comprehends diplomatic and international realities.

For Australia, the different cultural outlooks that determine policy, especially in the Asia-Pacific region, must be acknowledged for war to be understood. Australia must be prepared to employ stratagems that reflect these

realities. This includes the fact that the region is a maritime geo-strategic environment. Building on this, Australia has an opportunity in future strategic papers and policy to mould and inform force structure development and the drafting of national policy documents such as Defence White papers by an understanding of doctrine. Defence 2000: Our Future Defence Force stated that Australia's strategy is fundamentally maritime,5 which should be expected given Australia's geo-strategic situation. However, the reality is different when maritime doctrine is assessed and the term maritime is analysed. This is no surprise as it was not until 2000 that the RAN produced a maritime doctrine publication which aimed to explain maritime doctrine thoroughly and most importantly, in an easily understood way.

As noted, Defence 2000 and previous Defence papers did not utilise the term maritime in its correct doctrinal sense. This in part was because Australian maritime doctrine did not exist in a readily accessible form for the policy developers. The doctrinal problem is being redressed, with the issuing of Australian Maritime Doctrine in late 2000, and a range of additional doctrinal publications currently under development. This should lead to contemporary strategic circumstances. Australia's maritime environment, and likely future requirements better driving structure decisions. Contemporary strategic circumstances. Australia's maritime environment, and likely future requirements should drive force structure decisions. The foreseeable strategic situation is characterised uncertainty, operational variety. potential danger. In short, capabilities should be tailored to reflect this variety. The traditional flexibility of maritime power, revolving around sea control, is a most valuable strategic asset in the face of uncertainty. This leads to a conclusion in favour of achieving adequate surface capability, as well as a balanced, integrated, and interoperable fleet.

Underpinning such a maritime strategy is the strategic concept of sea control. Control of the air is an integral and essential element of sea control. Without sea control, maritime power projection can not occur and forces cannot be operated ashore. Additionally, trade to and from Australia can be interdicted at will. However, the central role of sea control for Australia's strategic security remains obscured by Australia's consistent continentalist approach.

The lessons of history re-enforce this fact.

Despite emphasising correctly the need for a balanced force structure, by not reflecting a maritime strategic approach, Defence 2000 sets force structure determinant Australian Defence Force (ADF) as capabilities most necessary for the defence of Australia in its explicit sense. That is those utilised for the defence of Australia and its direct approaches.6 This is because despite the acknowledgment that tasks such as Contributing to the Security of the Immediate Neighbourhood (CSIN) and Supporting Wider Interest (SWI) are important, and indeed tasks the ADF does on an almost daily basis, these are not viewed as basic requirements to defend Australia. The strategic task of Defending Australia (DA), that is military combat in Australia's approaches and on the mainland itself, is in essence a continentalist strategic posture and it has the major impact on force structure priorities. As stated, we are confident that forces built primarily to defend Australia will be able to undertake a range of operations to promote our wider strategic objectives.

Moving on from Defence 2000, the report Australia's National Security: A Defence Update 2003 does reflect an increasing likelihood for Australia to be affected by events outside the immediate neighbourhood and the need to operate there. One change is that the report does focus more on niche capabilities for specific and limited involvement in coalition operations.8 However, the maritime nature of Australia's environment is not the focus of the 2003 Update. Maritime strategy, maritime doctrine and strategic realities in the Asia-Pacific region would indicate that defending Australia's national interests continues to revolve around a balanced, technologically advanced force structure and this may well be emphasised in future Defence White Papers.

The post Cold War period has been witness to a shift in emphasis for military forces from the traditional concepts of the decisive battle, territorial conquest and inter-state wars to a more uncertain period. This is not to state that the traditional military role has been made irrelevant, but rather that additional and often more complicated and delicate roles have been added. It is also true that the changes have been most pronounced for western liberal democracies. However, statements that there is now little identifiable conventional threat to national existence should be restricted to the

North American landmass and Western Europe. Nations in the Asia-Pacific region that do not have the historical thread of liberal democracy are still establishing national identities and in some cases borders, and these nations are still very much rooted in the traditional military outlook of survival of the nation state.

Another enduring strategic reality is that the existence of radicalism and terrorism outside of state-on-state conflict is not new. In fact stateon-state conflicts exist alongside non-state terrorism and anarchy throughout history. Terror against civilian populations was common in the Crusades for example, as it was in the Viking raiding parties that attacked Britain and with notable historic figures such as Ghenghis Khan and his forces. What is new is its reach and impact on civilian populations that are not directly involved. This is due in the most part to the immediacy and intimacy of modern media reporting. This fact needs to be understood for the era post 11 September 2001 to be seen in perspective. The geo-strategic reality remains. Interests and geography both need to be defended in 2004, as they did in 1904. This calls for a maritime approach, as for Australia, a

maritime approach defends interests and thus geography.

Both Australia's strategic environment and sovereignty are maritime in nature. Within this context there are at least five major ways in which future strategic issues are uncertain. First, Australia exists in an uncertain landscape of political and economic development within the region. Second, Australia faces a spectrum of possible conflict and threat environments ranging from peace to high intensity conflict, which may involve the ADF in diplomatic, policing, peacekeeping and enforcement, and war fighting roles. Third, Australia's maritime forces may have to conduct various combinations of littoral and blue water operations. Fourth, these operations may involve various combinations of coalition, allied, and self-reliant operations. Finally, Australia needs to understand that these operations may be either within the Asia-Pacific region or out of area. The last point is predicated on Australia's responsibilities in Antarctica, and on the economic and strategic importance of Indian Ocean issues, which is likely to increase. Influencing these five issues is the increasing legal complexity of maritime jurisdictions in the



HMAS Balikpapan married up to HMAS Manoora, with HMAS Hawkesbury coming alongside off the Solomon Islands (RAN)

region.

Regional economies will increasingly depend on energy imports from locations both in the Asia-Pacific region, such as Australia itself, and from outside the region. This includes the Persian Gulf, an area that already features in Australian deployment considerations. Such an array of uncertain circumstances implies a wide variety of possible sea power roles. Goodwill activity and coercive diplomacy require presence and visibility in the form of port visits, exercises or simply the strength of presence, so as to influence the maritime security environment in line with Australian national interests. Constabulary tasks may involve issues of migration, smuggling (drugs, guns contraband), fishing and resources, piracy, and the environment. All of these tasks are likely to have a higher profile in the future. High intensity operations are likely to involve both sea control and denial for purposes of defence of sea lines of communications, blockade and support of amphibious and land operations. In short, there is no truer example than that in the Asia-Pacific region of Sir Julian Corbett's fundamental principle that maritime strategy revolves around lines of sea communication.9 This can only be more true of the region with the continuing pace of economic globalisation. This results in nations being more inter-dependent than previously for growth. societal economic stability prosperity, and even the survival of the government or political structure.

Despite the increasing importance of trade to Australia's economic, social and political stability, the 1986 Review of Australia's Defence Capabilities (Dibb Report) down played the importance of trade stating that the need to protect sea lanes out to a considerable distance is based on a tendency to overestimate the importance of trade to our national economy.10 The Report stated that a widespread interdiction of trade would only occur in a global war in which Australia could plan on being practically self-sufficient in most food, raw-material, and energy resources.11 The emphasis that military strategy is almost solely focused on combat operations, on the defence against a direct military attack to Australia itself, has been at the heart of Australian strategy since this Report, and it reflects the Report's continentalist nature. Dibb based his reasoning, with respect to trade issues, on the fact that Australia is a net exporter of energy and that a blockade or serious interdiction of trade would only be possible in a global conflict. However, with globalisation resulting in greater interdependence of economies, great harm could be done to the economy and the people of Australia by low-level economic warfare against Australian trade at distance. This impacts on the likelihood of interdiction of trade. Such interdiction would not require global war, as it could be accomplished via low technology, locally based attacks in choke points such as straits and via high technology attacks in the open ocean.

Moreover, Australia's reliance on overseas sources for manufactured high technology and consumer goods, the bulk of which travel by sea, makes the Australian economy and social condition vulnerable to trade interdiction. It should be noted that trade interdiction need not be the stereotyped sinking of ships as in the two world wars, but merely delays in the just in time supply chain that typifies the western trade and manufacturing system.

What does all this imply for Australian military strategy given the maritime nature of the region? Australia's current military concept of strategy reflects an enduring strategic preference for prevention of the conditions under which a threat could develop to the Australian mainland by achieving decision in maritime approaches rather than mainland itself.12 Australia's approaches include the archipelagos of Southeast Asia and the Southwest Pacific, referred to as the inner arc. The inner arc is characterised as a littoral environment in which the three operational domains of sea, land and air converge. However, this emphasis on the Australian mainland and maritime approaches needs to be carefully scrutinised. Threats to Australia's national interests may develop which do not involve threats to Australian territory itself or to the maritime approaches.

Dr John Reeve has noted that,

the concept of defending the inner arc is (as it stands) strategically flawed, potentially dangerous, and in need of further development. It is flawed because it does not relate concepts such as manoeuvre in the littorals to relevant principles of maritime strategy, especially sea control.

He then stated that: a concept for defending the inner arc must pay attention to controlling the sea or risk failure. ¹³ He also highlighted the dangers of the inner arc concept as it tends to neglect the extent of the Indian and Pacific Oceans and their intrinsic relevance to

Australia's national security and the need to better understand and respond to the fundamentally maritime nature of the region. 14 This supports the need for the development of Australia's military strategy and ultimately its Defence White Papers to be based rigorously on doctrine, especially that of maritime doctrine.

The maritime nature of the Australian environment has made it essential that Australia be able to conduct effective and successful maritime operations in support of its military strategy, especially within these regional areas. As Dr Eric Grove wrote, the use of the sea for movement is itself the core of maritime strategy in its traditional sense.15 Tradition in this sense is reality for an island nation in a region that is dominated so completely by the sea. The use of the sea for movement is the core issue facing Australia. Indeed, due to the overwhelmingly maritime nature of Australia's environment, any aggression against Australia, or any military action taken by the ADF in the region, will have a substantial, if not overwhelming, maritime component. Moreover, the dislocated nature of the Australian population, limited continental transport infrastructure, and outlying territories mean that the sea is essential for movement of civilian and military cargoes even within Australia's own national boundaries.

Issues such as these require analysis not only from an Australian perspective but also in the light of other contemporary maritime doctrines and the global influences that formulate a strategy. future national For strategic development the maritime environment should be the principal factor influencing the nature and attributes of a maritime power. Australia, however, displays many attributes of being a maritime nation with a continentalist outlook, most notably in the mythology of the bush in its military history. The bush mythology is used as the defining characteristic of the true Australian. The sea is reduced to the beach and its immediate vicinity. The challenge is to bring the air power, sea power and land power necessary to execute a maritime strategy to the area of operations via sea.

These matters necessitate review by taking into account the development of maritime strategic thought, highlighting the lessons of history and examining contemporary maritime operations and doctrine. The issue of legal jurisdiction and how concepts such as innocent passage, archipelagic sea-lane passage and high seas permit maritime forces to operate with great

flexibility in support of government policy need to be considered as well.

Australia's need for a maritime focus to strategy is greater than the specific requirements to conduct air warfare and to operate capable surface combatants. Maritime strategy also requires a logistic capability, both sea and air, amphibious/sealift platforms, an effective mobile army, long range maritime patrol, surveillance and strike aircraft, industrial maritime repair, maintenance and construction infrastructure and a credible merchant marine.

To a large extent given Australia's economic capacity, these elements exist within Australia to a reasonable degree. Nevertheless the current force structure has resulted in the absence of critical maritime enablers to ensure sea control in anything but a low-level contingency. The proposed Air Warfare Destroyer, with a capability to assert sea control, is needed to rectify this situation. Until this project delivers such a capability, there will remain an inability to defend sea lines of communications, and there will be a relatively poor power projection capability in anything other than a benign environment. A dedicated replenishment at sea capability is also necessary as a specific force multiplier that extends the range and endurance of surface combatants and other elements of a maritime task group, enabling the power projection and protection of sea lines of communications away from a shore support base. Afloat support ships are also required to sustain land forces and ADF forward operating bases.

Australia cannot conduct a meaningful maritime strategy in the absence of platforms capable of asserting sea control including control of the air. There is a fortunate juncture in technological development and ADF equipment obsolescence, which provides the opportunity to implement a sea control capability whilst acknowledging the reality that Australia can only ever be a medium power with a limited ability to project force. This military capability is restrained by the realities of economic power, weak national industrial infrastructure, and sparse population. However, in noting these geo-strategic realities, there is little doubt that the requirement for a credible maritime power projection and sea control capability is entirely iustifiable.

As 2004 approaches the challenge is for Australia to devolve from the historiography that has bound the nation to a continentalist view of strategy and to embrace a maritime strategic perspective. Such a perspective would lead to a truly joint maritime capability with the benefits of such a capability appreciated as central, not ancillary, factors in Australia's strategic posture.

About the Author

Captain Richard Menhinick joined the Royal Australian Naval College in 1976. After graduating in 1980 he undertook practical seatraining culminating in the award of his Bridge Watchkeeping Certificate in 1982. In 1987 he undertook the Principal Warfare Officer's course and then served on exchange at sea with the Royal Navy for two years. This posting included a deployment to the Persian Gulf for the Iran-Iraq War. On return to Australia he served at sea in the 1990-91 Gulf War. After this he spent two years as Fleet Direction Officer in Maritime Headquarters and was then appointed as Executive Officer of HMAS Hobart from 1993-95. On promotion to Commander he was posted firstly as head of the Operational Design Group at the Navy Combat Data System Centre, where he established the ADF Tactical Data Link Authority. He was then the Deputy Director Surface Warfare Development at Australian Defence Headquarters. He assumed command of the new frigate HMAS Warramunga on 24 January 2000. Following promotion to Captain he became the Director of the Sea Power Centre, Australia in February 2003. He has been appointed as the Commanding Officer of HMAS Anzac from December 2003.

¹ Sea Control is very much a multi-dimensional concept as it encompasses the control of the air, control of the surface of the sea, control of the undersea water column, control of the littoral sea and landmass and control of the electro-magnetic spectrum. Australian Maritime Doctrine defines the concept of sea control as that condition which exists when one has freedom of action to use an area of sea for one's own purposes and, if required, deny its use to an adversary. (p. 39.) It is a relative rather than absolute concept with the aim being to establish sufficient control, in a particular area, for a period of time, to enable one to use the sea for one's own purposes.

Sea Denial as a maritime strategic concept is in effect a subset of sea control. Australian Maritime Doctrine defines sea denial as the ability to deny an adversary the ability to use the sea for their own purposes without necessarily being able to utilise the sea for your purposes at the same time. (p. 39.)

³ C von Clausewitz, *On War*, Rapoport, A (ed), Pelican Books Ltd, Hammonsworth, Middlesex, England 1968, p.101.

4 ibid, p. 119.

⁵ Department of Defence, *Defence 2000: Our Future Defence Force*, Canberra, 2000, p. xi.

bibid, p. x.

ibid, p. 46.

⁸ Department of Defence, Australia's National Security: A Defence Update 2003, Canberra, 2003, p. 24.

⁹ J Corbett, Some Principles of Maritime Strategy, 1911, E.J. Grove (ed) Naval Institute Press, Annapolis, 1988, p. 342.

¹⁰ P Dibb, Review of Australia's Defence Capabilities, Canberra, 1986, p. 39.

11 ibid.

¹² Defence 2000 reflects this approach in the section on Maritime Strategy, p. 47.

¹³ J Reeve, Maritime Strategy and Defence of the Archipelagic Inner Arc, Working Paper No 5, RAN Sea Power Centre, Canberra, March 2001, pp. 1-3.
¹⁴ ibid, pp. 11-12.

¹⁵ E Grove, *The Future of Sea Power*, Naval Institute Press, Annapolis, 1990, p. 12.



Sea King helicopter conducting vertical replenishment from HMAS *Manoora* off the Solomon Islands (RAN)

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Maritime Interception Operations Screen Commander in the Gulf

Part II - Operations Bastille and Falconer

By Captain P.D. Jones, AM RAN

As Christmas 2002 approached, the Maritime Interception Force (MIF) maintained its unremitting presence both in the entrance to the Khor Abd Allah (KAA) waterway and further south in the UN holding ground COMISKEY. The MIF consisted at the time of the cruiser USS Valley Forge, destroyers USS Milius (command ship), HMS Cardiff, USS Higgins and the frigates HMAS Anzac, USS Thach, HMAS Darwin and the Polish support ship ORP Czernicki. In addition we had boarding teams from the US Coast Guard, US Navy SEALS and the Polish GROM Special Forces.

After the pre-Ramadan rush of date smugglers, the illegal traffic coming out of the KAA had reduced dramatically. Occasionally a small dhow rush of 10-20 vessels would try their hand but with one or two MIF ships in the approaches it was rare for any vessels to leak through the cordon.

The weather was quite cool and the risk of hypothermia awaited the unprepared; this was particularly the case at night. I had immense respect for the boarding parties and boats crews that maintained the presence on the water. Supporting them were the line handlers, maintainers and cooks who were always there for the boats return. The other teams to bear in mind were the Captains and their bridge and operations room teams. The demands on the navigation teams, which operated close off shore in MA-1 were significant; where possible, ships were rotated out of MA-1 after a couple of days. This was not always possible and Anzac and Darwin bore the brunt of this burden. Indeed the Marine Engineering Officer of Anzac referred to the more open MA-2, where engineering drills and maintenance were possible, as the promised land.

While the sanction work ticked on, the political situation seemed to be heading inevitably towards conflict with Iraq. Within the

MIF we had set in train some important procedural measures to improve our cohesion. These include improved merchant ship, aircraft and boat reporting and tracking procedures. The MIF Commander was now also the Local Surface Warfare Commander and moves were underway to establish a Local Air Warfare Commander. All these small but important steps were to ensure that not only the MIF could operate in a broader warfare context but that when the inevitable force build-up occurred, the much enlarged Coalition force could operate safely in this relatively confined area. It was slow incremental work with various workshops held in different host ships. There was considerable goodwill and the growing integration of the MIF was great to see.

On the larger canvas it became clear that should war transpire, the MIF would be involved in a littoral sea control mission. It would involve countering the Iraqi Navy, supporting amphibious and mine warfare forces and possibly conducting naval gunfire support (NGS). There were inherent risks in this mission. The Iraqi mine threat loomed largest as did some form of asymmetric attack.

It was at this time that the close links forged between successive RAN CTGs, the US COMDESRON 50 (based in Bahrain) and their staffs became of crucial importance. The incumbent COMDESRON 50, Commodore John Peterson, USN was working on key aspects of the planned maritime campaign against Iraq. It was an enormous undertaking for his small staff. Both the RAN CTG staff and our liaison officers ashore were ideally placed to help in this work. So began two months of planning and consultation. The key ingredient we were providing was a very good knowledge of the North Arabian Gulf (NAG). All through this process we backbriefed the Commander Australian Theatre, Rear Admiral Bonser, RAN and the Australian National Commander in theatre, Brigadier McNarn.

By the end of this involved process, we had fleshed out the draft plan for operations in the

¹ MA-1 and MA-2 were geographical operating areas used by the MIF.

NAG. In addition, both US and Australian political and military command chains had agreed that the RAN Task Group would be part of the operation and the RAN command element would be CTU 55.1.1 (the Maritime Interception Operations Screen Commander). The notion of the *screen* in this context was the furthest upthreat units of the Coalition naval force.

While the planning proceeded. MIO continued unabated. The other relentless activity was the naval build-up in the Gulf. The almost daily arrivals of new ships left little doubt in the minds of most sailors that there would be a war. Among the arrivals were the RN frigates Marlborough, Chatham and Richmond. On a rotational basis these ships were assigned to the MIF. Sadly we were to lose our old friend Cardiff who had done so much work on the improved warfare procedures which were now part of our operations. The British frigate trio quickly settled into the MIF; due in no small measure to their being in our MIO Chat Room watching our conduct of operations, since they had been sailing down the English Channel. On a personal level, I found the three commanding officers keen to integrate into the MIF.

Also now at sea was Commodore Peterson in the Valley Forge. Instead of being the alternate MIO Commander he was now my immediate superior as the NAG Commander (CTG 55.1). At first glance this extra layer of command was a cumbersome arrangement, but his purview was large indeed and included liaison with the Kuwaiti-Bahraini-Emirati Defence of Kuwait Task Group as well as supporting Special Forces operations. The key to the CTG 55.1-CTU 55.1.1 relationship was our friendship. Even with good communications friction between our hard-worked staffs was inevitable. At least weekly visits between us were fundamental to the planning and execution of MIO and the KAA clearance operation. A key aspect in our approach was to move ships freely between our two commands depending on the operational requirement.

Commodore Peterson rightly observed that the KAA clearance operation involved a plan of many parts but none of which were complex. We had to be able to deal with a possible mass breakout of 150 merchant ships and 300 dhows. The MIF had to search for mines and the Iraqi military. The cleared ships had then to be tracked down the western side of the Gulf, clear of Coalition and merchant shipping. Possibly at the same time the MIF had to support the Royal

Marines assault on the Al Faw Penninsula. This would involve protecting landing craft and conducting indirect bombardment. The MIF would also have to escort the mine countermeasures (MCM) force up the KAA and conduct ongoing riverine patrols to ensure unfettered access of the waterway for Humanitarian Aid shipping. The riverine patrol element was new to many of us. Fortunately on my staff was Lieutenant Commander Fred Ross, RAN who had joined the RN at the tender age of 13, and was an invaluable source of knowledge. He had participated in the Borneo operation of the 1960s and remembered some very useful procedures we could adapt.

Equally important to me was the positioning of additional RAN Liaison Officers into the new the command chain. Lieutenant Commander Dom McNamarra, formerly in Bahrain was in Valley Forge and my old deputy Commander Mark McIntosh, was now in Constellation. Already in Bahrain were the very experienced trio of Commanders Chris Percival and Phil Spedding, and Lieutenant Dave Hughes. The crucial job of the RANLO can be thankless. The RANLOs were the glue that kept the RAN TG engaged in the operation. As a result of their efforts I was kept better informed than most in the Gulf and warned of looming problems. CMDR Chris Percival was also commanding the RAN Logistic Element. The efforts of this team in supporting the growing RAN TG were nothing short of inspirational. I have no doubt that their efforts will go down as one of the great logistic achievements in our Navy's operational history.

In January-February 2003 there were three noteworthy events: the anthrax vaccination program, the arrival of HMAS *Kanimbla* and the deployment of the Australian Clearance Diving Team Three (AUSCDT 3).

Anthrax Vaccinations

It is difficult to encapsulate the anthrax saga in the *Journal*. It is also impossible to capture the emotion and heat it generated. The implementation of a voluntary policy that required compulsory compliance to deployed personnel was inevitably difficult in already deployed units. The implementation was aggravated by a combination of unreliable communications and an incomplete education program.

I know many at home thought the sailors who refused the vaccination were a bit soft.

While a very few may have used the situation to get home early, the vast majority of those who refused to be injected were sincere in their conviction. This issue highlighted our sailors' great strength, that is, that they are intelligent and questioning people.

In dealing with the anthrax program the efforts of many personnel both in theatre and back in Australia to help bring the ships up to strength were impressive indeed. I was very proud of the tremendous effort of the Task Group personnel, led by the Commanding Officers and medical staffs in dealing with this issue.

HMAS Kanimbla

The arrival of HMAS Kanimbla into theatre was much anticipated. Initially she was viewed as providing important strategic lift and was to be assigned to the Coalition naval logistics commander. While she would have been excellent in that role, she also had a proven track record in Maritime Interception Operations (MIO) from 2002. Significantly for me her Commanding Officer (Commander McCourt) had sent me an excellent brief on her command and control capabilities. We quickly realised she was a perfect match for the command ship for KAA clearance operation. She had the unique combination of shallow draft. huge communications bandwidth. planning space and accommodation Coalition boarding parties. So on Kanimbla's arrival in Bahrain, my staff and I shifted from Milius to Kanimbla.

Importantly for my team, waiting for us in Kanimbla were six members of the RN battle watch who would augment my staff. They were part of a RN CTG staff that was to have relieved us as MIF Commander in the normal course of events. Leading the RN staff were a very capable PWO, Lieutenant Commander Andrew Stacey. He became my new Operations Officer and daytime battle watch captain Lieutenant Commander Peter Arnold would become my nighttime battle watch captain. It was a model I was copying from Vice Admiral Sandy Woodward, RN. He had two Captains in this role because he believed you needed experienced officers who would be confident to make decisions and not call you. This enabled you to both get rest and to think. This and some other astute remarks he made in his memoirs One Hundred Days proved invaluable to me. Probably the other keen observation he made was that every headquarters only possesses part of the picture. Armed with this fragment they can be frustrating to deal with. Despite this they are generally trying to do the right thing. This I found to be very true and this notion tempered all my dealings with my two command chains.

In the last week of February, Kanimbla joined the MIF and my staff and I resumed the MIF command duties. The impact of her presence was immediate. Her planning and briefing spaces were the centre of activity for the KAA clearance operation. Rarely a day went by without either a meeting or a combined planning session. My deputy, Commander Peter Leavy brought his considerable energy and ability to get on with people to bear in coordinating this effort. The two major events were a two-day planning session involving first the command teams and then commanding officers. One involving Rear Admiral Costello himself followed these meetings. The role of the commanding officers was crucial. combined both a broader perspective and a good grasp of the practical. In the briefing with Admiral Costello, I noted that Commanding Officers have a creditability all their own. Their input, ownership and support of the plan were vital. This was particularly the case with NGS where the CO Marlborough, Captain Mark Anderson took the lead in advocating the use of the ships in this role despite some concern within the USN.

From a national perspective Kanimbla gave the RAN TG a national flagship and sense of independence. The range of support facilities and accommodation space it provided were extremely useful. For example, it could embark the growing media contingent and insert them into the rest of the MIF for short periods. Importantly she had a Sea King helicopter that proved an essential enabler in the build-up phase. Amongst other tasks every Monday this helicopter joined in the straining USN Desert Duck logistic runs supporting all MIF units.

AUSCDT 3

The arrival of the diving team in theatre brought another dimension to the RAN CTG duties. Led by Lieutenant Commander Scott Craig they had come fresh from an exercise with the USN. Initially they faced a complicated reconstitution through Bahrain and Kuwait. They would enter Iraq via road convoy. The diving team was a mix of first Gulf War veterans and young sailors straight out of the box. They impressed me

straight away with their enthusiasm and operational focus. I saw my responsibility was to both ensure they were employed in accordance with higher level guidance but also help them maximise their contribution to the operation. I enjoyed working with Scott and his team both in Kuwait and Umm Qasr.

The War

In the week or so preceding the war there was one event after another to attract our attention. Most important to me was that the Iraqis were on the move in our operating area. The last of the Iraqi large naval or government ships had sailed down the KAA and round into the Shatt Al Arab (SAA) and Al Basra. Our contacts among the merchant shipping were telling us of Iraqi military on tugs and that explosives were to be laid on the oil terminals (MABOT and KAAOT) and on navigation marks. Rumours of mines abounded. We strongly doubted mines had been laid but we closely shadowed all Iraqi vessels. Equally important was maintaining our overt presence to deter any mine laying.

In preparation for the conflict, additional Coalition boarding parties and their support elements were embarked in Kanimbla. The ship's smooth integration of these teams and their refinement of boat recognition procedures to prevent fratricide reflected highly on Kanimbla.

Two days before the war a mass breakout of dhows occurred. The crews had heard of the impeding start of the war on an erroneous news report. In their desperation they started to jettison cargo. The last thing we needed was flotsam and jetsam floating down the Gulf. After a hasty series of conference calls, Commander 5th Fleet approved our recommendation to clear the KAA rather than turn the dhows around in accordance with the UN Sanctions. It was a historic moment because it was the effective end of the 12 year embargo. Our well-developed plan was activated, but because it was happening two days early, the force disposition was different. After a few minutes of assigning units to task on a white-board, my Operations Officer executed the revised plan on a voice circuit. Darwin was made Scene of Action Commander and took on the detailed execution. It worked amazingly well. For their part, once the dhows crews understood what was happening they were very compliant. For some boarding teams and dhow crews it was a poignant moment. After months of being

boarding and being turned back up the KAA this was to be their last meeting. Among those vessels cleared was an Indian dhow that had tried to break the embargo two nights earlier and tragically lost a crewmember shot dead by a stray warning shot from a Kuwaiti patrol boat.

As expected, the word of the clearance quickly spread up the KAA and the following day the large steel hulls made their outbound passage. In all 56 dhows and 47 merchant ships were inspected and cleared in about three days. This early clearance was a bonus for us because it emptied the waterway in preparation for combat operations.

On the early morning of 19 March, the patrol boat Chinook, with my forward liaison team embarked, was ordered to intercept an Iraqi tug heading from an offshore oil terminal to Al Basrah. Onboard were a handful of UN workers potentially destined to be held hostage. In some minor brinkmanship, the UN workers were removed and the tug allowed to proceed on its way. As feared, the UN workers reported Iraqi military were present on the two offshore oil terminals with some suspicious equipment.

That afternoon, on the eve of the war another dust storm blew up. In Kanimbla, and I suspect the other MIF ships, an eerie calm had descended. The ship's company went down to the tank deck to draw the last of the individual chemical and biological protection equipment. The suits were removed from protective bags. People quietly went about their spaces and sorted their personal affairs. Beards were shaved off and close haircuts were de rigour; both produced some horrendous sights that served to relieve some of the tension. That evening our friends in the US and Polish Special Forces, who we saw a couple of nights a week in the MIO days, landed on MABOT and KAAOT. Anzac was ordered close in for support. Within the hour all was secured and fortunately the Iraqi explosives had not been set. So far, so good.

At the same time as the oil terminal operation, SEALS were securing the two related shore oil installations. Within two hours the artillery and air bombardment of the Al Faw Peninsular would commence, as would the Royal Marines assault. Most of the MIF units were close inshore and so although visibility was poor, the sound and shock waves of the artillery and B-52 strikes were strongly felt. At the same time USN cruisers and destroyers were announcing one by one that their Tomahawk firing zones were activated. Although some of the ships were just a couple of miles distant, no missiles were seen through the gloom. At around 0300 Marlborough, Anzac, Chatham and Richmond were detached for their bombardment. At approximately 0600 Anzac commenced the first fire mission. We monitored the progress in a chat room and on the NGS coordination circuit. From the results coming in it became clear they were conducting probably the most accurate NGS engagement in naval history.

During the night another aspect of the operation was executed. This was the protection of an amphibious transit lane for the fast LCACC hovercraft to take equipment from Bubyan Island across the KAA to the Al Faw Peninsular. Chinook, Firebolt and a clutch of US Coast Guard patrol craft reported three Iraqi tugs and a barge coming down the KAA. They boarded the vessels, which proved suspicious only for their large crews. The decision was taken to hold the tugs north of the assault lane and dispatch a Kanimbla boarding party with USN explosive experts at first light. So while the four frigates were just starting their bombardment, Kanimibla's boarding team were clambering over the tugs and barge. In the light of day, disguised mines were discovered on one tug. One of the boarding party also noted an electrical cable running from a hut on the barge into the barge pontoon itself. After a short inspection a trap door was found, as were 68 mines.

In another development, the patrol craft Adak picked up three hypothermic Iraqi sailors floating down the KAA. Adak brought them straight to Kanimbla where the detachment and medical team swung into action. Another person who swung into action was Major Majed Al Shamari. The Kuwaiti Navy Chief, Major General Al Mulla had loaned Majed to us for liaison between the MIF and the Defence of Kuwait Task Group which the General commanded. Majed explained to the scared Iraqis that they were not going to be shot as the Iraqi hierarchy had warned. In the process he also gained their confidence and they told their tale. They were survivors from an Iraqi patrol boat hastily manned by Revolutionary Guards and ordered to sail and attack the MIF. En-route they had unwisely engaged a C-130 gunship and were promptly sunk.

With the mouth of the KAA well guarded by our patrol craft, and *Marlborough* smoothly running the very active bombardment group, my main focus was the Iraqi tugs and barge. Reports came in bit by bit on the size of the find. I needed to know if any mines had been laid and therefore whether we were in a minefield. As could be appreciated, my first reports of events had sent shock waves up the command chain and there was much pressing for answers to a myriad of questions. Potentially this was a turning point of the maritime campaign. I sent Kanimbla's XO (and a specialist clearance diver) Lieutenant Commander Mick Edwards up to the tugs to take charge of the scene and give me an accurate assessment of the situation. This he did admirably and when combined with more information volunteered from more captured Iraqis, I was very confident no mines had been laid. This meant the NGS and the entire KAA clearance operation could continue unimpeded. Indeed we soon learned that the Iraqi plan was to lay mines further south on the following day. The true value of the MIF's close blockade had effectively maintained for over a year had become abundantly clear.

At this point it is worth mentioning the sterling service provided by *Kanimbla's* two Australian Army LCM-8s. Their tasking included pre-positioning AUSCDT 3 and the Royal Marines equipment into Kuwait, laying danbuoys to provide shipping transit lanes and logistically supporting the Rigid Hull Inflatable Boats (RHIB). They also proved ideal platforms to relocate Iraqi prisoners away from the action. Indeed the arrival of a prisoner-laden LCM-8s alongside *Kanimbla* provided a rare glimpse of the enemy for our sailors.

By midnight on Day One events were pretty well under control. (Having said that our bombardment group was still doing a tremendous job for the Royal Marines). It was time to finish off reports to go up the Coalition and Australian command chains. By this stage I was making daily telephone calls to my Australian immediate superior, Rear Admiral Bonser. I found these calls tremendously valuable as mind-ordering exercises. Admiral was a good sounding board and at times a source of valuable advice without wanting to intrude into the Coalition chain of command. The other opportunity the lull provided was to discuss with my team our next move. This was to prepare to support the mine clearance operations up the KAA.

During the next couple of days events moved quickly. Once the Al Faw Peninsular was secured, the five Coalition mine countermeasures vessels and two helicoptertowed sleds commenced operations. My lead
unit to protect the MCM group was *Chinook*,
commanded by the very level headed and brave
Lieutenant Colin Hayes, USN. I will always
remember his face when I told him I was
removing the embarked US Coast Guard
boarding party and wanted any unnecessary
personnel off *Chinook* because she was the first
non-MCM vessel proceeding up the channel
behind the hunters. He thought for a moment
and said it seemed a reasonable call; we moved
on to the next subject.

The progress of the MCM force up the KAA was difficult with a large amount of mine-like objects littering the bottom. This was hardly surprising with the waterway being a battle zone on several occasions in the 20th Century. As the minehunters made their way up, our patrol craft and RHIBs commenced ever-lengthening patrols. *Kanimbla* for her part provided fuel, water and other support for the craft.

Our plan called for sustained riverine patrols. The necessity for such patrols had been the source of debate during the planning phase. But the Al Faw Peninsular was a sparsely populated area and the Royal Marines were thin on the ground. The prospect of a resown minefield would have further delayed Humanitarian Aid shipping. In short, it was a vulnerable flank for the Coalition.

One of the biggest difficulties in executing a plan is to know when to deviate from it. This is particularly the case when it has required considerable staffing and extensive buy-in at all levels. An example of this point for us was the RHIB patrols. It became clear early in the war that after the initial mass breakout of shipping, the once congested KAA was now devoid of shipping. All vessels that had not made a break had gone further up the river and many of their crews had gone home. This meant the need to board ships along the river had vanished with only the riverine patrol requirement remaining. Two days into the boat patrols, four crews got into difficulties when a stronger than expected south-westerly change came through with winds exceeding 65 knots. Fortunately all crews found refuge in either our versatile LCM-8s or among the minehunters. The following day, I flew up to Umm Qasr to see for myself the state of the KAA and the visit the divers. During that flight I looked down on a lone RHIB near Warbah Island. The risks I was putting the boarding parties under versus the negligible operational

gain came home to me. So after only two days the RHIB riverine patrols were halted on the entry of the first Humanitarian Aid ship, RFA Sir Galahad. It was not a universally popular decision but the pendulum had swung in the maritime campaign. My priority was now to get those boarding parties safely home. The riverine patrol could be adequately done by the larger patrol craft.

Sir Galahad's arrival was effectively the end of our mission. We retained command of the riverine patrols because we felt strongly about not taking our eye off the ball. As if to underline this point, the ever-vigilant *Chinook* found a cache of mines, small arms, anti-tank missiles and a partly inflated suicide boat on the shore.

By the beginning of April, the USN and RN were rapidly drawing down their fleets. This did not mean there was inactivity. Even at this late stage the Hopper fired a clutch of Tomahawks at a distant target and one of the missiles flew 500 feet over Kanimbla's flight deck. As part of the draw down, Darwin was sent for a well-earned port visit and it was decided Kanimbla would go into port on 6 April. As such, I would handover the MIF to my immediate superior Commodore Peterson in Valley Forge. The time was right to go and we were a spent force by this stage. After a round of farewells to the divers and our British, US and Kuwaiti comrades, Kanimbla shaped course for Jebel Ali. On arrival, I handed over to Captain Mark Kellam the duties of Commander, RAN Task Group 633.1. I was very proud of the MIF and it was a great honour to serve with a dedicated and talented team.

About the Author

Captain Peter Jones joined the RAN in 1974 as a Cadet Midshipman. He is a gunnery officer by specialisation. His postings have included Director of Doctrine, Tactics and Operational Analysis at the Canadian Maritime Warfare Centre, Commanding Officer HMAS Melbourne and Director of Naval Strategy and Futures. He is the Commander Australian Surface Task Group and in that capacity he commanded the RAN Task Group in the Gulf from October 2002-April 2003. He will be promoted to Commodore in December 2003.

KAA Clearance Operations - Operation Falconer

By Lieutenant Charles Bourne, RAN

Your immediate smooth integration into challenging multi-national battle force operations increased the strength of our coalition and instantly served as a force multiplier. Demonstrating exceptional skill, you provided unmatched flexibility for mission critical activities.

Vice Admiral Tim Keating, USN Commander, U.S. Fifth Fleet June 2003

HMAS Kanimbla sailed for the Persian Gulf from Sydney on 23 January 2003. After completing a rapid workup and assessment period while enroute to Darwin, the ship deployed and entered the area of operations on 14 February. The ship initially was tasked with sea lift of equipment and stores under Operation Bastille. Following the successful offload, the ship transitioned into Maritime Operations Interception (MIO) under Operation Slipper, and the ship conducted its first boardings of diverted vessels on 26 February.

Kanimbla joined a number of ships upon entering the North Arabian Gulf (NAG), including HMA Ships Anzac and Darwin, numerous USN and RN major fleet units supported by US Coast Guard vessels and USN patrol boats. In addition, Kanimbla had also embarked the Commander Task Group (Captain Peter Jones, RAN) in Bahrain, and was acting as the MIO command ship.

As operations continued into March, it was becoming apparent that hostilities were becoming more likely. As a result, coalition maritime units were ordered to commence preparations for combat operations against Iraq. Australian involvement in this plan was known as Operation Falconer.

The Australian CTG was tasked with a significant role once hostilities commenced. The aim was to clear the Khawr Abd Allah (KAA) waterway in order to provide safe passage for humanitarian aid shipping to the main Iraqi port of Umm Qasr. (See Figure 1)

This mission represented a huge challenge. The KAA is about 40nm from its mouth in the Gulf to the port of Umm Qasr. It was potentially mined, had hostile forces operating along its length and also was riddled with wrecks and ordnance from the 1990-91 Gulf War. In addition, potentially hundreds of steel hull vessels and cargo dhows were also in the

waterway providing a major security issue for coalition forces.

Concept of Operations

The plan that was conceived involved units from numerous countries, and contained some complex issues involving coordination and communications. Assets allocated included all the Australian units, USN patrol boats, US Coast Guard cutters, USN and RN Mine Counter Measures Vessels (MCMV's), USN Aerial MCM (AMCM) helicopters and armed helicopters for aerial surveillance and protection. The other major key assets were the multiple Rigid Hull Inflatable Boats (RHIBs) and crews, including the US Law Enforcement Detachment teams from the coalition ships who would be used to clear vessels from the KAA. These RHIBs in conjunction with the US patrol boats, USCG cutters and Kuwait Navy patrol boats would conduct on going security sweeps of the KAA.

Kanimbla's Role

Early in the planning process, *Kanimbla* was identified as the key to the KAA clearance plan. With her shallow draught, spare bunk space, command and control facilities and reserves of fuel, stores and water, she provided the coalition with a vessel ideally suited to the task. The ship could:

- transit further into the KAA than any other large coalition unit
- accommodate multiple RHIBs and crews for operations
- provide prolonged reserves of fuel, water and stores for KAA operations for RHIBs and crews, and also patrol boats and Coast Guard Cutters
- provide command, control and communications for the operation
- provide a ready deck for prolonged helicopter refuelling operations

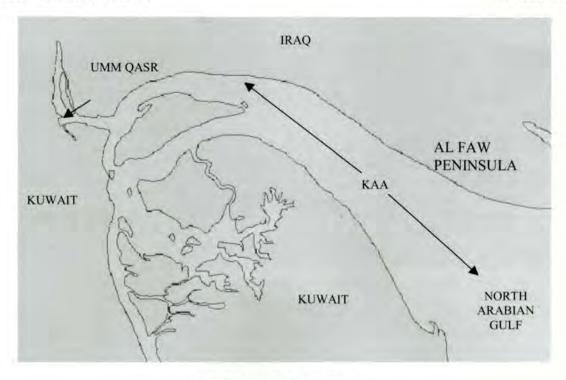


Fig 1. Area of Operations

- be used for temporary holding of Prisoners of War (POW's)
- provide two LCM8 landing craft for operations in the KAA and for support of forces ashore at Umm Qasr once captured.

The Clearance Plan

The aim of the plan was to clear the KAA in order to move Humanitarian Aid shipping into Umm Qasr as soon as possible. The main phases of the plan were:

- 1. Clear the KAA of all vessels.
- Conduct and support mine clearance operations.
- Control the KAA using helicopter and RHIB patrols.
- Commence the Humanitarian Aid Shipping routine into Umm Qasr.

Phase 1. This would involve coalition RHIBs moving into the KAA and inspecting all vessels and ordering them out into the Gulf. From there they would be ordered to proceed south and clear the area. The vessels would only be inspected for possible mining activity and weapons, or escaping Iraqi regime members. The original inspections for illegal cargo under the United Nations resolutions would no longer apply. Kanimbla would provide the bulk of the RHIBs and would be able to surge ultimately up to nine RHIBs (with one additional spare) and teams on a rotating basis for this phase of the plan.

Phase 2. With the KAA clear, the AMCM and MCMV's would commence mine clearance operations with support from USN Patrol Boats and RHIB patrols. Kanimbla at this stage would remain in the mouth of the KAA waiting for a safe passage to be cleared. As the waterway was cleared, Kanimbla would move to designated anchorages in order to provide support to the patrol boats and RHIBs and to coordinate the plan. This phase of the plan had the most risk attached due to possibility of wide spread mining in the waterway and the resulting time needed to confidently sweep the area. Anzac was also tasked during this phase to provide Naval Gunfire Support (NGS) if required, to advancing coalition troops on the Al Faw Peninsula.

Phase 3. With the KAA cleared in all respects, the plan then called for ongoing patrols by RHIBS, patrol boats and helicopters to ensure maximum security for the planned Humanitarian Aid shipping. Once again *Kanimbla* would provide the basis for the RHIB patrols, being able to maintain 24 hour operations during the period.

For the operation, the KAA was divided into sections corresponding to buoys in the channel. These buoys and the sections in between were given codewords, and this was the method to be used for allocating and determining RHIB patrol areas and positions.

Phase 4. With Umm Qasr captured by

coalition forces ashore, the emphasis would then shift into the safe transit of Humanitarian Aid shipping. The shipping would be escorted by patrol boats, with RHIB and helicopter patrols continuing in order to maintain security.

Friendly Fire Protection Measures

With so many RHIBs operating in a hostile environment, the chance of mistaken identity and a friendly fire incident was of primary concern. As a result, a number of antifratricide measures were built into the RHIB operations plan. The basis of these measures was secure communications via Wagtail VHF radios carried in each RHIB, and an up to date plot of RHIB positions ensuring all participants knew exactly where all RHIBs were at any time. The other measures taken were:

- provision of return to force procedural manoeuvres to confirm identity of RHIBs
- · identifying marks and symbols
- provision of mandatory stand off ranges from major units to avoid RHIBs being engaged if unidentified when returning from missions
- use of flares and flashing light to indicate to a RHIB the manoeuvre(s) required or to pass clearance to a RHIB to close if communications were lost

Training and Familiarisation

With the requirement to embark over 100 personnel and the additional 7 RHIBs for the operation, training had to be conducted. As a result, the RHIBs and teams were embarked in *Kanimbla* before hostilities commenced in order to conduct training and validation of procedures. This period proved very beneficial for all involved and allowed for refining of the plan and amendments to be made to procedures. Areas covered included:

- ship familiarisation for embarked teams
- launch/recovery operations of RHIBs from Kanimbla
- · rhib live fire practices
- anti-fratricide procedural training and validation
- communications equipment training and familiarisation
- KAA patrols and designated areas
- Rules of Engagement briefings

Actual Events

As hostilities approached, the Iraqi military acted first forcing as many steel hull vessels and dhows out of the KAA between 17-20 March. As a result, Phase 1 of the clearance operation was never completed according to the intended plan, but the successful result achieved never the less confirmed the integrity of the procedures and methods developed. The breakout of over 100 vessels occurred in two phases:

17-18 March, Dhow Rush. The first incident involved approximately 55 dhows being forced out of the KAA. *Darwin* took control as on scene commander, and with the assistance of other units, the dhows were herded into holding areas pending checks and clearance. In this first instance, the ability of *Kanimbla* to surge boarding teams proved the mothership concept that had been formulated.

19-20 March, Steel Hull Rush. With the dhow rush cleared the next group to be forced out of the KAA were the steel hull vessels. During this period almost 50 vessels exited the KAA. Once again the Phase 1 plan was modified slightly and then swung into action to successfully deal with the incident. As with the dhow rush, the vessels were herded into a holding area and inspected by coalition teams before being released. Again, *Kanimbla's* surge ability was thoroughly tested, with at one stage 6 teams being utilised for boarding operations. Despite this incident being successfully dealt with, the RHIB teams would be required again barely 24 hours later for another major event.

21 March, Capture of Iraqi Minelaying Tugs and Barge. Following capture, an in depth inspection by a Kanimbla boarding team uncovered a major minelaying operation on board a number of Iraqi tugs and a barge. In the end 86 mines were discovered in a sophisticated operation designed to avoid routine inspection. In order to provide mutual support to the team on board the Iraqi tug, multiple teams were surged up into the KAA and the situation was quickly and safely controlled. The problems in terms of safety and timings of coalition plans that would have been encountered if this mining operation had been successful, cannot be over emphasised.

Enemy Prisoners of War. At the same time the mine laying operation was discovered, Kanimbla successfully processed a number of prisoners of war before handing them over to US authorities. Utilising the internal tank deck,

the prisoners were moved through the various stages required before being moved to a USN vessel by *Kanimbla's* LCM8 landing craft. The success of this aspect of the operation once again came down to solid planning and proved *Kanimbla's* versatility.



HMAS Kanimbla XO (LCDR Edwards) on board one of the Iraqi Minelaying Tugs. One row of exposed LUGM mines can be seen on the left. The 44 gallon drums on the right cover the other row of mines. (RAN)

Phase 2 and Beyond

As the MCMV's moved up into the KAA and cleared the channel, *Kanimbla* eventually moved up as well. The mine clearance plan actually took longer than expected due to the amount of objects on the KAA seabed and the weather, which stirred up the silt and reduced the ability of the minehunters to identify contacts.

The ship never reached Umm Qasr but managed to push around 30nm into the waterway. During the subsequent phases, RHIB patrols were conducted 24 hours a day as planned and security maintained in the KAA. The success of these patrols was highlighted when a check of a derelict vessel revealed an Iraqi observation post that had recently been in use. Weapons, ammunition and other articles were captured for exploitation by the coalition, as well as removing a large threat from the area of operations.

During this early period of the hostilities, Anzac created history when she conducted NGS against Iraqi positions on the Al Faw Peninsula. This was the first time that the RAN had conducted combat NGS since the Vietnam War and ratified an earlier, well debated decision to fit the 5" gun to the *Anzac* class. The highly accurate results achieved by *Anzac* were essential in assisting coalition troop movements ashore.

During these phases of the operation, and right through to the end of hostilities, Kanimbla and coalition forces conducted hundreds of RHIB patrols in support of the clearance of the KAA. During this time not one friendly fire incident occurred and proved the integrity of the anti-fratricide measures in place. Eventually at the height of the operation, Kanimbla had 9 RHIBs embarked for patrols. The logistical and operational burden placed on the ship was great but overall proved to be a great success.

In addition to RHIB patrols, Kanimbla fuelled, watered, victualled and provided other services to the USN patrol boats, Coast Guard Cutters and MCMV's on almost 40 occasions. This allowed these units to remain on station longer and enhance the security patrols of the KAA. Kanimbla also operated as a lilypad for coalition helicopters providing fuel and respite as they conducted security patrols of the waterway.

With hostilities complete, the entry into the KAA and safe arrival of the first Humanitarian Aid ship at Umm Qasr was a major achievement. This also effectively completed the clearance of the KAA and achievement of the aim.

Major Challenges

Despite the overall success of the plan, there were some areas that proved to be challenging throughout the period of operations:

Weather. In general, the weather conditions experienced were reasonably benign. The ability however, for conditions to change quickly caught out coalition forces on a number of occasions. The worst example, a sudden onset of a shamal, resulted in 65kt winds, low visibility and high seas. A number of RHIBs were conducting patrols at the time and were saved by patrol boats, MCMV's or Kanimbla's own LCM8 landing craft who took them on board and provided shelter.

Coalition RHIBs, Teams and Fatigue. With up to 9 RHIBs and teams embarked, there were a number of different RHIB Standard Operating Procedure's, weapons, communications systems and procedures that existed on board. Some were learnt by trial and

error and initially caused some problems. However by the end of operations, all teams had integrated and the patrol schedule worked well.

Fatigue was another vital factor that had to be managed carefully. Some of the patrols and missions lasted eight or more hours. In addition, during the surge periods normal rotations had to be bypassed in order to provide as many teams as possible. The effect on boarding party and boat crew personnel become evident early in the operation, however careful utilisation of crews by the operations team ensured fatigue never became a major issue.

Maintenance and RHIB Availability. With the mine clearance operation taking longer than expected, coalition RHIBs conducted hundreds of patrols, launches and recoveries. As a result eventually some of the RHIBs became unserviceable and others became overdue for servicing. As part of the plan, Kanimbla had embarked coalition RHIB maintainers as well as the patrol teams and crews.

Maintenance schedules were adhered to as closely as possible but at times for example, Kanimbla had 2-3 RHIBS unavailable due to maintenance or defects. In addition, it was not a simple matter of placing different teams with different boats. For example, placing a US team into a RN RHIB didn't work due to different weapon mountings and the size of the US crew being too big for the RN RHIB.

Summary

In the end, the KAA clearance operation was an outstanding success. As of June 2003, Humanitarian Aid shipping continues to move unrestricted into Umm Qasr, providing relief for the people of Iraq. The integrity of the concept of operations and plan proved to be very solid in all respects, and only required small amendments even when Phase 1 started early and not to the coalition schedule. The highlights of the operation were:

- validation of the mothership concept and RHIB surge ability of Kanimbla during the dhow and steel hull rushes and subsequent RHIB patrol operations
- the capture of the Iraqi minelaying operation early in the war
- the outstanding performance of Anzac during Naval Gunfire Support of coalition troops on the Al Faw Peninsula

- the safe operation of multiple RHIBs from different countries with no friendly fire incidents, weapon or operating safety breaches
- the versatility of Kanimbla's flight deck providing fuel and sustainment to multiple coalition helicopter types during hundreds of sorties during the campaign.

Conclusion

The Operation Falconer clearance of the KAA and subsequent security operations in the waterway were a resounding success for all units involved. Despite the heavy presence of USN and RN units, the small Australian naval taskforce proved themselves force multipliers, capable of achieving results much greater than their relative size suggested.

The corporate knowledge and experience gained during the period will benefit the RAN greatly in future operations. The success of the clearance was indicative of the level of planning that had been undertaken. For all personnel involved, the experiences and sights encountered during Operation Falconer will stay with them for the rest of their lives and add greatly to the proud history of the Royal Australian Navy.

About the Author

Lieutenant Bourne joined the RAN in 1994 as a Direct Entry Officer via HMAS Creswell, He completed Seaman Officer training in late 1995 having sent time on HMA Ships Hobart and Kanimbla. He gained his watchkeeping certificate in September 1996 on HMAS Brisbane and remained with her until August 1999. He qualified as an Anti-Submarine Anti-Surface Aircraft Controller in 1997 and as an Air Intercept Controller (AIC) in 1998. Lieutenant Bourne posted to HMAS Newcastle as an A/PWO and AIC in January 2001, which then deployed to the Solomon Islands as part of a peace monitoring force. He graduated from PWO course in late 2001 and remained at HMAS Watson as an instructor. In January 2003 he posted to HMAS Kanimbla which shortly thereafter deployed to the Gulf. On return to Australia Lieutenant Bourne will post to HMAS Darwin as the Direction Officer.

The Role of a Deployed Psychologist during Maritime Operations

by Lieutenant Sarah Chapman, RANR

HMAS Kanimbla recently returned to her home port at Fleet Base East following a six month deployment to the Middle East in support of Operation Falconer and operation against Iraq. Prior to departure from Australia, Lieutenant Chapman, a Naval Reserve Pyschologist undertaking full time service was identified for secondment to Kanimbla during the deployment. The Royal Australian Navy (RAN) currently employs twenty-five uniformed Psychologists in a Reserve capacity for the provision of psychological support and assistance as and where needed, in either a maritime environment or ashore.

In December 2002 it was thought that the deployment of a mental health specialist would facilitate an evaluation of the merit or otherwise of routinely deploying Psychologist on maritime operations and enable specific recommendations to be made for preparing and sustaining personnel for arduous duties and recurrent maritime deployment. In addition, provision psychological support and counselling for personnel deployed to the Middle East Area of Operations (MEAO) on RAN warships was deemed advantageous noting anticipation of hostilities with Iraq and Iraqi forces.

Traditionally, the provision psychological support, counselling, Officer Candidature (OC), Transfer of Category (TOC) and other suitability assessments has been undertaken ashore and has been the purview of civilian psychologists, supplementation as required uniformed Navy counterparts. Unlike the United States Navy, who routinely embark Psychologists in their aircraft carriers, the RAN has most often preferred to limit the employment of uniformed Psychologists to shore establishments and until recently, recruiting centres. Implicit in this traditional division of labour has been the assumption that personnel requiring psychological support and counselling are largely unfit for sea and that OC, TOC and suitability assessments are more properly undertaken ashore. Noting the 24 hour requirement for watch keeping and boat operations in a maritime environment often results in disrupted sleep and ongoing or cumulative fatigue for many, there is arguably some merit in the latter.

Notwithstanding this, the current Fleet op tempo precludes many personnel from meeting deadlines for TOC and OC assessment or else results in an unnecessary delay in career decision-making and progression for those occupying billets at sea. Recent recognition of the need to provide further opportunities for career enhancement and progression whilst under way lies in the fact that the Sailors' Leadership and Management Faculty is now offering the Leading Seaman Leadership Course (LSLC) to ships at sea.

During her return passage to Australia on completion of Operation Falconer, Kanimbla facilitated delivery of the third LSLC to be conducted at sea, in recognition of the difficulties Junior Sailors have in being released for this promotion prerequisite course. A Psychologist teaches two of the modules comprising the LSLC, these being suicide awareness and prevention and stress management.

The Joint Health Services Agency Health Plan currently includes the provision of psychological support to deployed personnel. To date, this support has been provided by uniformed Psychologists on short periods of annual Continuous Training and Continuous Full Time Service and has comprised mental health education sessions and psychological screening during the pre- and post-deployment stage, the latter being undertaken during return passage to home port.

As testimony to the utility of the psychological service available during Operation *Falconer*, two hundred and fortynine counselling hours were provided between 04 February through 14 June inclusive² for personnel embarked in HMA Ships *Kanimbla*, *Anzac*, *Darwin* and *Sydney*. Counselling

¹ It is noted that some personnel receive provisional protection without having completed the LSLC.

² This excludes report writing and psychological testing.

included a range of services for anxiety, stress, anger and fatigue management respectively, as well as TOC, OC and other suitability assessments and ad hoc personal counselling. The latter included, but was not limited to, assertiveness training, time management, study skills training, relationship counselling and career choice and decision making.

These contact hours also included two Suitability for Retention assessments for drug-related offences in accordance with DI (N) 13-1 and Return to Australia Psychological Screening (RTAPS) for Combined Task Force (CTG) and Kanimbla personnel returning home early from deployment. Lastly, counselling was provided for those personnel who refused to consent to anthrax vaccination prior to entering the MEAO and who were subsequently returned home to Australia.

The RTAPS comprises a questionnaire assessing the extent to which the deployed member has been subjected to traumatic incidents and known deployment stressors such as risk of unauthorised discharge of weapons, risk of being injured or killed and potential exposure to nuclear, biological or chemical threat. The RTAPS is accompanied by a psycho-education session highlighting the risk of burnout (emotional exhaustion and depersonalisation) to personnel returning home from extended military operations and the impact that this emotional and psychological state may have on attempts to re-establish intimacy with friends, family and loved ones. The third and final component of the RTAPS is an individual interview during which personnel may ask questions pertaining to their own psychological adjustment and anticipated homecoming in private with the interviewing Psychologist. Whilst there has been some debate and contention regarding the provision of this service, personnel who are attend an individual interview more often than not describe it as a worthwhile endeavour.

The other specialist psychological service provided during Operation Falconer was Critical Incident Mental Health Support (CMS). CMS is the new counselling and intervention framework used within the Australian Defence Force following a critical or traumatic incident. Research has demonstrated that early intervention and support following a critical or traumatic incident can reduce the likelihood that the affected member will suffer long term

psychological sequelae.

CMS counselling and intervention was provided to the embarked 817 Squadron flight after Shark 07 suffered a catastrophic engine failure whilst operating in Iraqi territory. CMS counselling was also provided to two Air Defence personnel following an unauthorised discharge of an RBS-70 missile, two aircrew maintainers after witnessing two Royal Navy Sea King helicopters collide over the flight deck of HMS Ark Royal and to another member following an incident ashore during a port visit.

Information addressing mental well being, positive living skills, conflict resolution, stress management, operational and fatigue management was also distributed to personnel during the deployment. The pre-deployment psychological brief was delivered with the assistance of the embarked Chaplain. Specifically, personnel were reminded of preferred and optimal ways to maintain intimacy and familiarity in relationships despite physical separation and distance and the anticipated emotional stages of adjustment to deployment to the MEAO in anticipation of supporting the coalition effort to liberate Iraq. The latter included provision of information regarding cognitive-behavioural techniques to manage anxiety, accept uncertainty and correct irrational, negative thinking that may affect individual operational effectiveness during the forthcoming operations.

Prior to the commencement of hostilities against Iraq, there was an increase in the number of personnel seeking psychological support for anxiety, fatigue and anger management. Counselling was provided with due regard to watchkeeping and operational requirements. The embarked Primary Critical Reception Facility (PCRF) proved ideal for sleep management interventions, specifically instruction on progressive muscle relaxation.

Education and awareness was further provided with reference to operational fatigue management and the importance of fatigue countermeasures in remaining sufficiently alert to be considered fit for duty. Personnel were advised that the human body is least responsive during 0200 and 0600 and that most industrial and maritime accidents occur during these times. Fatigue countermeasures were highlighted to watch keepers. These included:

 ensuring anchor sleep (a period of sleep obtained at the same time each day)

- strategic use of caffeine (use of caffeine during the early morning and early afternoon and the first half of a watch period)
- increased awareness that complex and interesting tasks are less prone to disruption from sleep deprivation than boring, uninteresting, repetitive and/or well-rehearsed tasks
- a twenty-minute sleep every six hours can partially satisfy human sleep requirements for as much as a sixty-four hour period
- individuals vary in the amount of sleep they need to adequately perform tasks, however research has consistently demonstrated that four hours of sleep within any one twenty-four hour period is the minimum requirement for adequate performance of vigilance tasks. Vigilance tasks are those requiring sustained attention such as those performed by Operators Combat Systems and Boatswain's Mates employed as Lookouts.

A preparatory psychological briefing was also given to personnel embarked in *Kanimbla* who were likely to be involved in body handling and recovery of human remains if the ship were to proceed up the KAA waterway to deliver humanitarian aid to Umm Qasr. The briefing addressed those aspects of body handling that personnel are least likely to consider, such as the initial emotional shock response to the sight and smell of a decaying or disfigured corpse and the emotional and physical fatigue that this work often brings. This was the first such session for many personnel, including the embarked coalition forces.

The overall psychological health and emotional well being of personnel deployed on Operation Falconer on Kanimbla, Darwin, Anzac and Sydney met with expectation. Specifically, there was an increase in Command, Divisional and self-referrals prior to the commencement of hostilities against Iraq and a peak in the number of referrals for sleep. fatigue and anger management. Referrals for OC, TOC and career and ad hoc counselling increased once hostilities had ceased and personnel were able to pursue more routine administrative matters.

The tangible benefit in having embarked a Psychologist in *Kanimbla* during her deployment to the MEAO and involvement in *Falconer* is the development of mental health

briefing materials. discussion papers, brochures and fliers to better prepare personnel deployed on future operations. The Army deployable psychology unit (1 PSYCH, Randwick Barracks) has an extensive resource library developed by the uniformed Army psychologists who have deployed to East Timor. It is intended that lessons learned during deployment to Operation Falconer and RTAPS data obtained from personnel deployed on maritime operations previously will assist developing support materials counselling protocols more suited to the maritime environment.

As a uniformed Psychologist I frequently advised Just tell 'em to harden up! and that (personnel) don't need Psychologists; they just need their mates and their DO. In reality, their shipmates often don't have the answers (or if they do, they are often in a similar predicament and unable to provide objective advice and assistance). Similarly, their Divisional Officers don't often have the time to invest in other than a single, unstructured session that does little other than make the member feel better for a short period. Whilst the talking cure is a well-reputed therapeutic tool and is most often provided by a social support network including family and friends, the role of a deployed Psychologist differs in being a more structured, disciplined and informed process designed to educate the member and increase their level of selfefficacy.

The primary role of a deployed Psychologist is to teach uniformed personnel to harden up; to invest time in them and devise a structured program to assist them in resolving the issues and difficulties they are experiencing at sea. The distinct advantage in providing a deployed psychological service is the ability for the Psychologist to observe personnel in the performance of their duties in the operational environment to which they are required to adapt. The deployed Psychologist has an enhanced understanding and awareness the current situational demands personnel and is able to design counselling interventions tailored to suit, or otherwise remain cognisant, of those demands. For example, assertiveness training was provided for a number of Leading Seamen during the course of the deployment. Personnel were assigned homework and given a structured program to increased self-confidence and

enhance leadership skills in a seagoing environment. Whilst this information can readily be provided ashore, the opportunity to provide such information and counselling at sea encouraged these personnel to apply the principles they were being taught whilst in an operational environment and during routine performance of their duties. In the majority of cases this resulted in enhanced learning and a more realistic appraisal of the importance of skill development in this area.

It is a time-honoured law of human behaviour that when you don't know what to do, you do what you know. The argument that have never previously employed Psychologists at sea is an example of this natural tendency to ignorance. It appears the RAN is currently forward thinking in the provision of a deployable psychological service and cognisant that delivery of psychological support and assistance is a condition of service that has gained an increased profile with the introduction of the ADF Mental Health Policy. The way forward has not yet been made clear, but the provision of a deployable psychological service available in support of maritime deployments remains a distinct possibility.

About the Author

Lieutenant Sarah Chapman joined the Australian Naval Reserve in March 1988. Since then she has been employed as a submarine psychologist at HMAS Stirling, specialising in fatigue management and completed an overseas deployment with HMA Submarines Collins and Waller. Her most recent posting as Psychologist on board Kanimbla was the first operational deployment undertaken by a uniformed psychologist.

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How old is Australia's Navy?¹

This might seem a simple question, but over the years the Australian Navy's birthday has remained a source of some confusion. The date now accepted is 1 March 1901. The previously accepted date of 10 July 1911 is not the birth date of naval forces in Australia, rather it was the date that the Sovereign granted the title Royal Australian Navy. As with other forces institutions the name has changed over the last 101 years, but for the Navy the date of 1 March 1901 marks the creation of Australia's Navy. This is made inviolable by the fact that by 1911 Australia had already possessed a unified naval force for more than a decade, as proclaimed in the Australian Constitution.

The legal basis for the creation of the Navy comes from Section 51 of the Constitution, which gave Parliament the power to make laws with respect to the naval and military defence of the Commonwealth. At Federation the Governor-General became Commander-in-Chief, and on 1 March 1901 the states transferred their naval and military forces and everyone employed in their connection to the Federal Government, By the following year the two existing arms of Australia's defence force were officially recognised by the titles Commonwealth Naval Forces (CNF) and Commonwealth Military Forces (CMF later Australian Military Forces).

The ships inherited by the CNF from the previous State navies were tired, old and inadequate even for training, and there was little hope for early improvement. The CNF's budgetary allocation in 1901-02 was just £67,000. By contrast, the CMF's allocation amounted to £638,000. Despite the disparity, a dilapidated Australian Navy was not a major national concern if Britain's Royal Navy could continue to be relied upon to provide maritime protection. Successive British naval commanders provided this reassurance, and the Commonwealth's payment of a subsidy towards maintaining Royal Navy vessels in Australia, reinforced the idea that issues of naval policy were best left with the British Admiralty.

Watching the growth of foreign naval power in the Pacific, local naval authorities were less confident. Led by Captain William Creswell, they feared the withdrawal of British forces under the exigencies of war. Australia, they argued, lying at the extreme end of the world's sea routes and possessing no land frontier was open to attack only by sea. With communications cut, industrial paralysis and economic devastation would follow. As Creswell observed caustically in a 1902 parliamentary report, the spectacle of some 5,000,000 Australians, with an Army splendidly equipped, unable to prevent the burning of a cargo of wool in sight of Sydney Heads, is only the ordinary consequence of a policy of naval impotence.

Deep issues of maritime strategy exercised only a handful of Australian minds, but the idea of a more capable navy, locally manned, and under the Commonwealth's executive direction, gradually gathered support. Once he became Director of Naval Forces in 1904. Captain Creswell embarked on a program designed to breathe new life into the CNF's operations. Despite the restricted budget he brought several of the gunboats and torpedo boats back into commission and renewed regular training exercises to improve combat readiness. The greater visibility and renewed activity of the CNF proved the quality of Australian naval personnel and managed to excite public interest, but the Service could not long survive without the replacement of its ancient vessels. Fortunately, Creswell found an ally in the new prime minister, Alfred Deakin, who, like his Naval Director, preferred active cooperation to subsidies. In December 1907, Deakin announced that the CNF would be expanded to include a flotilla of submarines and coastal destroyers, and in February 1909 Australia's naval representative in London requested tenders for the first three vessels, the destroyers Parramatta, Yarra, and Warrego.

Australian authorities intended the CNF's destroyer flotilla take full responsibility for coastal defence. However, by the time Parramatta and Yarra arrived in local waters Australian naval policy had made an even greater advance. Finding itself hard pressed to maintain its global naval supremacy the Royal Navy decided to support a more substantial Australian contribution towards regional defence. At the 1909 Imperial Conference the Admiralty suggested that the CNF expand to include a self-contained fleet unit based on a battle cruiser and several light cruisers. The combined package represented an ideal force structure; small enough to be managed by

Australia in times of peace but, in war, capable of effective action with the Royal Navy. Federal Cabinet gave provisional endorsement in September 1909 and orders were made for the additional ships. Just as important, was the passing of the *Australian Naval Defence Act*, 1910, which provided the clear legislative authority for a navy that would no longer be limited to Australian territorial waters.

Since 1904 CNF warships had been designated His Majesty's Australian Ship (HMAS), but this had never received the King's sanction. During their visit to London for the coronation of King George V, Australian ministers made known their desire to have the prefix Royal attached to the Australian Navy's title. On 10 July 1911 King George approved the request with great satisfaction. The decision was promulgated to the CNF on 5 October. Thereafter the Permanent CNF officially became the Royal Australian Navy (RAN), and the Citizen Naval Forces the Royal Australian Naval Reserve. At the stern of Australian ships, the Royal Navy's White Ensign replaced the Australian Blue Ensign. The Australian Commonwealth flag thereafter took the place of the Union flag at the bow.

The Australian Navy did not just happen in 1911, it had existed from 1901. The bestowal of the title Royal reflected more the progress made in the previous ten years in turning a polyglot collection of obsolescent vessels into a true fighting service. Perhaps more important in hindsight, however, was that the steady revitalisation of the Navy marked Australia's first major step towards nationhood. Arising from a deeper recognition that defence of Australia's national interests could no longer be consigned to others, the decision to acquire a sea-going navy represented an assumption of national obligation of momentous proportion. The foresight of men like Creswell and Deakin was amply rewarded in 1914 when the German East Asiatic Squadron was decisively deterred from carrying out its plans for cruiser warfare in the Pacific. But for the Navy, wartime Prime Minister W.M. (Billy) Hughes later declared, the great cities of Australia would have been reduced to ruins, coastwise shipping sunk, and communications with the outside world cut off. One would be hard pressed to find more appropriate words to mark more than 100 years of service by Australian sailors.

Sea Control and Surface Combatants²

Concepts which have evolved from the maritime strategic school of thought include command of the sea, sea control and sea denial. Command of the sea is an absolute concept. which espouses free. unchallenged maritime operations by a nation, while at the same time ensuring that an adversary is incapable of using the sea to any degree. However, although the concept might be valid in a theoretical sense, practical experience demonstrates that achieving command of the sea has become increasingly difficult, if not unattainable. The evolution of the submarine and aircraft, for example, have made it clear that the value of maritime operations is in relation to the use of the sea and not for the possession of the sea itself.

Sea Control

Acknowledging the vital lessons of history and the overarching importance of strategy, the contemporary term sea control was coined to encompass the modern realities of war at sea. Australian Maritime Doctrine defines the concept of sea control as that condition which exists when one has freedom of action to use an area of sea for one's own purposes and, if required, deny its use to an adversary.3 It is a relative rather than an absolute concept and one that may be achieved through key battles, such as Matapan (1941) and Coral Sea (1942), or through prolonged campaigns, such as the convoy battles in the Atlantic (1939-45) and off the east coast of Australia (1942-43). The enduring feature in all these operations, however, was that sea control was a transient achievement, aiming to establish sufficient control, in a particular area, for a period of time, to enable the Allies to use the sea for their own purposes. This use of the sea reflects the fact that the ability to facilitate maritime power projection is, in many ways, the most fundamental thing that sea control enables. As Professor Colin Gray has noted navies fight at sea only for the strategic effect they can secure ashore, where people live.

Sea control today is very much a multidimensional concept as it encompasses control of the air; control of the surface of the sea; control of the undersea water column; control of the littoral (if operating in that environment); and, control of the electromagnetic spectrum. Each of these multidimensional aspects are important in each warfare discipline. For example, in maritime air warfare, which may involve a credible threat environment involving operations in close proximity to an adversary with a viable strike capability, the absence of air power and air warfare will almost inevitably prevent a force achieving sea control. Sea control is essential for the projection of maritime power, especially for the conduct of amphibious and sea transport operations and for the support of forces operating ashore.

Related to sea control is sea denial. Sea denial as a maritime strategic concept may either be used independently or as a subset of sea control. Sea denial on its own may be defined as the capacity to deny an adversary the ability to use the sea for their own purposes for a period of time.5 The U-boat campaigns of both World Wars are examples of a sea denial strategy, as were the minefields laid by Iraq off the Kuwaiti coast during the 1990-91 Gulf War. Despite some initial success, most denial strategies ultimately fail. In most cases these failures can be attributed to the onedimensional nature of the strategy. Once effective countermeasures to the U-boat had been introduced, for example, the Germans had no other effective method with which to continue their sea denial strategy. By contrast, the successful campaign waged by the US against Japanese shipping during World War II multi-dimensional. involving submarine and air assets, and acting as a subset of their overarching strategy of sea control.

The Role of the Surface Combatant

Sea power is rightly recognised for its flexibility, in particular the ability of surface combatants to change their readiness swiftly between different levels of operations and apply graduated force commensurate with the situation and across the spectrum of conflict. In the diplomatic role, surface combatants make a psychological impression through their perceptible presence and powerful appearance. They have similar visibility in the policing role possess inherent capabilities interdiction and boarding. In higher intensity surface combatants readiness and global reach with sustainability and controllability, which can be non-invasive and easily withdrawn if required. Deployed in

the protection of sea lines of communications they have multi-dimensional capabilities and are essentially weapons of sea control rather than denial. In support of land operations, surface combatants are likewise capable in a wide range of tasks including escort, bombardment, supply and on occasion lift including where necessary evacuation. In amphibious operations, especially conjunction with maritime air power, surface combatants can facilitate approach with manoeuvre and surprise. All these functions relate directly to Australia's national and regional circumstances and make surface combatants essential to the central concept of sea control.

The modern surface combatant therefore retains a vital, indeed fundamental, role to play in the future maritime force structure. Their mobility and endurance allows the flexibility to maintain a continuous presence in moving scenes of action. Their sensors and weapons work throughout the maritime battlespace and span operations against aircraft, ships and submarines, and against forces and assets ashore. Moreover, mobile naval platforms have the ability to poise and persist in theatre, often for months at a time. The surface combatant thus remains a potent and flexible capability to the sea control requirement, particularly when they lever off other assets and advanced intelligence, surveillance fusion and dissemination systems. Indeed, the flexible response options and sustained presence of surface combatants in periods short of open hostilities may help to control or prevent particularly in complex escalation. ambiguous circumstances where submarines and aircraft are not free to make full use of their primarily offensive potential.

Australian surface combatants must be capable of operating throughout the maritime approaches and beyond. Project Sea 4000, the Air Warfare Destroyer (AWD), is the project which will ensure that Australia will acquire and maintain a sea control capability into the future. Able to act across all environments simultaneously, the ships will provide a variety of capabilities appropriate to securing sea lines of communications, the projection of power ashore, the provision of fire support, and the protection of friendly sea, land and air forces in the open ocean and the littoral. The mission requirement is to provide a sea control capability for the ADF. In this way the role

and mission of the AWD could perhaps better be understood in terms of a sea control combatant.

Australia's Maritime Dependence⁶

An understanding of Australian strategic realities should begin with acknowledgment that fundamentally Australia is a maritime nation. A maritime nation can be defined as a nation in which the maritime environment impacts extensively in the geographic. economic and strategic dimensions. As a maritime nation Australia is located in one of the most complex open ocean, littoral and archipelagic maritime regions in the world. Australia's regional neighbours are primarily archipelagic states and island groups. Almost all states in the wider region have long coastlines. In and around Indonesia, the Philippines and the South China Sea are situated the greatest cluster of significant straits in the world. Strategically, the Asia-Pacific region is central to Australia's security, and its geography affects all aspects of Australia's security

In both geographical and political terms Australia is unique. This is because, unlike the other inhabited continents, it is an insular landmass, surrounded by seas that for the most part are empty of islands. It is the only continent to be occupied by a single State, making Australia by far the largest State in area in the world without a land border. By virtue of both these factors, Australia claims one of the largest maritime areas of all States. with an Exclusive Economic Zone (EEZ) and continental shelf covering an area of 16 million square kilometres, including tropical islands and hazardous Antarctic waters. This increases to over 20 million square kilometres when the extended continental shelf and access to the resources of the seabed within this area are included. Australia is also responsible for the second largest maritime zone in the world, including a responsibility for maritime search and rescue, and the guidance of allied shipping in time of crisis.

When looking at the geographic features of the globe it is relevant that 70% of the earth's surface is covered by sea and over two-thirds of the world's population lives within 100 miles of the coast. This population figure is well over 95% for Australia itself, and is even higher for most of Southeast Asia. Oceans provide access to nearly all parts of the globe, with 85% of states having a coastline.

Professor Geoffrey Till notes that the increase in the world's population and living standards will increase the need for global movement of bulk cargoes. He also notes that the World Bank's current forecast is that by 2012 world seaborne trade will have doubled in terms of ton-miles and this trend will continue.7 This is of direct relevance to Australia's maritime environment. Noting that Australia is a net exporter of energy, especially coal and raw materials such as iron ore, and a net importer of manufactured goods, it is of vital importance that a true understanding of the role of maritime strategy for Australia is pursued. The Australian economy is absolutely dependent on shipping. Globalisation has meant that Australia's economy is more integrated with other nations and less selfsufficient. Of our international trade, 99% by bulk and 73.5% by value is carried by ship, with about 95% of that in foreign flagged vessels.

In acknowledging the vital role that air transport plays in supplementing seaborne trade, the role of the maritime environment is still relevant. This is because all trade which goes by air flies over the sea and is just as influenced by Australia's ability to control the sea, as is the overriding proportion which goes by sea. Without control of the maritime environment air services to Australia can also effectively be interdicted, and as a result Australia could be virtually isolated.

Trade is not the only issue that makes Australia a maritime nation. Other important areas that could be targeted by any adversary include tourism, employment and resources, especially offshore oil and gas installations and their supporting infrastructure. Employment and trade are intrinsically linked. One in five jobs in the city and one in four jobs in the country are directly related to the export of goods.9 Even low level threats against shipping at distance from Australia could have a deleterious impact on costs, which may severely damage Australia's trading position. These include fuel costs, insurance premiums and time constraints imposed by routing ships by other than the most direct route. Thus, Australian security requires a much broader focus than just conventional invasion through

the northern sea-air gap.

Oceans governance is a significant issue. Australia is one of the most biologically diverse nations on earth and our marine environments are home to spectacular arrays of species, many of which are unique to Australian waters. In the southern temperate waters as many as 80% of species are endemic (not found elsewhere). In our northern waters, which are connected by currents to the Indian and Pacific Oceans, overall diversity is higher, although the proportion of endemic species only around 10%. Marine industries have excellent potential to contribute to future economic and employment growth. particular, marine tourism and aquaculture can create new jobs in regional Australia. Australia also has extensive obligations under other ocean-related conventions and cooperative arrangements dealing with matters including shipping, meteorology, fisheries, biological diversity, pollution and the conservation of marine mammals (whales, dolphins and porpoises).

Maritime boundary delimitation gives one example of the importance of maritime issues to Australia. Australia has already negotiated a number of maritime delimitation agreements with other countries: specifically Indonesia, Papua New Guinea, the Solomon Islands and France. The major outstanding delimitation that Australia has is with New Zealand, and negotiations on the maritime boundary are ongoing. The legal jurisdictions impacting on Australia also reflect its maritime dependence. Despite declarations by some countries seeking to limit military operations in EEZs, maritime forces may operate with few if any constraints. Activities are conducted in a nondiscriminatory fashion, having due regard to the coastal states' rights with respect to fiscal, sanitary, immigration and economic issues.11 This underpins the importance to Australia of the maritime strategic concepts, such as sea control, and flowing from it the protection of sea lines of communications and power projection.

For Australia an important regional strategic issue is the impact of archipelagic sea lanes (ASL) legislation, especially in the cases of Indonesia and the Philippines. Conscious of its strategic and economic dependence on passage through the archipelagoes to its north, Australia has played a vital role in negotiations on this issue. Notwithstanding this, an example

of differing interpretations of maritime legal issues in the region that impact on neighbouring States is the case of Indonesia and their decision to designate three north-south ASLs through their archipelago.¹²

The maritime nature of the Australian environment has made it essential that Australia be able to conduct effective and successful maritime operations in support of its military strategy, especially within these regional areas. As Dr Eric Grove wrote, the use of the sea for movement is itself the core of maritime strategy, in its traditional sense, Tradition in this sense is reality for an island nation in a region that is dominated so completely by the sea. The use of the sea for movement is the core issue facing Australia. Indeed, due to the overwhelmingly maritime nature of Australia's environment, any aggression against Australia, or any military action taken by the ADF in the region, will have a substantial, if not overwhelming, maritime component. In summary it could be argued that Australia stands alone among industrialised nations as the one most dependent on the sea and maritime power. As such, it behoves Australia to maintain an appropriate maritime strategy and associated defence capability to ensure our national interests are adequately protected.

Why the ADF needs Major Surface Combatants¹⁴

Australia confronts uncertain threats from global terrorism and regional instability with a renewed emphasis on meeting trouble *before* it gets to our shores. There is consequently increased emphasis upon military engagement in the resolution of such crises. For this reason, and given the maritime nature of the Asia-Pacific region, continued emphasis should be placed on maritime power, with significant implications for Australia's Navy.

The application of maritime power encompasses a wide range of operational situations from peacetime constabulary or benign activities to full hostilities in high intensity joint situations involving the projection of power. This includes applying naval diplomacy as a means of keeping the peace and thereby avoiding the actual use of

the full range of their military capabilities.

Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control. Sea control may be defined as that condition which exists when one has freedom of action to use an area of sea for one's own purposes for a period of time and, if required, deny its use to an adversary. Importantly, sea control includes not only the sea surface, but also the air space above, the water and seabed below, and, particularly in a littoral environment, adjoining land areas. This is a critical capability for any maritime nation that seeks to preserve sovereignty over its resources, territories, right of free trade and interests, and is essential for the joint projection of power. Importantly, from a maritime perspective, implicit with sea control is control of the air above it. It is therefore, a joint responsibility. Without sea control Australia could not have fought in New Guinea in WWII and more recently, the ADF's operations in East Timor would not have been possible without the ability to sustain the force by sea and the attendant sea control required to achieve this. For the ADF to undertake most of the objectives envisioned by the Government, it will need to establish a certain level of sea control in order for its operations to succeed.

In many senses the 'workhorses' of the

fleet, major surface combatants, which include both destroyers with a strong air warfare bias and general-purpose frigates, are the vital means by which the Government exercises sea control and its use of the sea in close partnership with the Air Force. Surface combatants are multi-purpose vessels, uniquely capable of operating across the full spectrum of operations, with an emphasis on anti-air, anti-surface and anti-submarine warfare, but with significant utility in many other areas.

Apart from their primary function of sea control, the surface combatant offers other unique capability options for Government. More specifically, the flexibility of surface combatants in rapid role change between different levels of operations and their ability to apply graduated force commensurate with the prevailing situation across a broad spectrum of operations, make them particularly versatile assets. They are the smallest surface units that are deployed autonomously for extended periods for military tasks, and their numbers and capabilities allow them individually to cover a wide range of military, constabulary and diplomatic tasks. They are particularly useful in establishing maritime presence. They are also versatile building blocks for larger national and coalition formations, essential defensive elements of



task groups, and contributors of organic helicopters to a force.

Because warships operating outside the 12nm territorial sea of other countries do not challenge sovereignty in the way that land forces or over-flying air forces do, in some instances warships may be the preferred or only military diplomatic option available to the Australian Government. International legal regimes, such as the United Nations Law of the Sea Convention, allow for warships to linger indefinitely on station, providing ongoing presence and an immediate response to a developing situation. The influence of such presence devolves fundamentally credible combat power, and the demonstration of military capabilities that can be used to reassure, impress or deter a foreign power. Surface combatants possess substantial combat power, enabling them to exercise a range of influences, from the benign to the coercive, without violating national sovereignty. This range of response makes them particularly useful tools in periods of uncertainty or crisis, providing the Australian Government with the maximum freedom of decision.

The utility of surface combatants in peacetime for policing, interdiction and boarding is considerable and Government has often called upon these inherent capabilities. Examples include southern ocean fisheries law enforcement, remote ocean border protection, support to Government agencies in the board and seizure of ships involved in illegal trafficking of contraband, and regional peace keeping support. In the diplomatic role, surface combatants provide a powerful psychological impression through their perceptible presence while retaining the ability to continue action through to combat if necessary.

While each of these roles can and have been very effectively performed by Australia's surface combatant force, these types of activities cannot alone be allowed to determine the level of capability invested in new surface combatants. High intensity operations must remain the basic force determinant, for while advanced surface combatants can effectively contribute to the full spectrum of war fighting missions, the same assertion cannot be made for those ships tailored for the lower end of the spectrum. This is particularly relevant in an era of increasing violence when many of the military capabilities hitherto required for higher order contingencies, are becoming

increasingly relevant in situations previously thought of as being constabulary in nature.

In higher intensity operations, surface combatants, which must be fully interoperable with our major allies, can be rapidly deployed and sustained for joint or combined operations wherever Australia's national or international interests demand. Surface combatants provide a significant contribution to littoral manoeuvre and land operations and are critical for the joint projection of power in other than benign circumstances. This includes both open ocean and littoral escort to ensure ground forces and their support reach their objective safely, force protection - including area air defence - in support of littoral operations, maritime command and control, fire support for forces ashore, special forces insertion, limited sea lift and support, and evacuation. During the 2003 Iraq conflict many of these capabilities were exercised by Australian surface combatants, which very effectively integrated with the multinational maritime force.

In terms of evolving capability, surface combatants have undergone a significant transformation of their capabilities in recent years. While submarines still pose a threat to both merchant ships and naval vessels, the most significant threat comes from the air in the form of air attack and long-range air and surface launched anti-ship cruise missiles. Previous generations of destroyers and frigates carried mostly defensive weapons to screen higher-value ships such as aircraft carriers, amphibious ships and merchant vessels from attack. Today, surface combatants can still carry out those critical missions, but they are increasingly taking on new roles such as landattack (using both missiles and extended range guided munitions) and theatre ballistic missile defence. With further improvement to their radars, combat systems and missiles, they will also likely play a key role in national or regional missile defence in the future.

In the future, Air Warfare capable Destroyers will seamlessly integrate with other ADF assets, including the Joint Strike Fighter and Airborne Early Warning and Control aircraft (supported by Air to Air Refuelling aircraft), Over the Horizon Radar, Global Hawk, and land force capabilities (especially Ground Based Air Defence systems) to provide a pervasive, networked and continuous air defence umbrella for both maritime and joint littoral operations. This potent complementary

joint capability will be critical in order to provide area air defence for an ADF task force deploying from Australian shores and establishing itself in some other place. Air Warfare capable Furthermore, an Destroyer will provide a high level of air control, 24 hours a day, even in the absence of continuous aircraft support. This is particularly relevant given Australia's maritime geography and the extended ranges at which aircraft may be required to operate within our region. The Air Warfare Destroyer, while having a strong core air warfare bias, will not, however, only be used for air defence. Capable of operating at the highest end of the conflict spectrum, with their significant warfighting and maritime command and control capabilities, they will be Australia's primary sea control capability across the full spectrum of operations. Given their multi-role capability, the Air Warfare Destroyers could perhaps more appropriately be referred to as Sea Control Combatants.

While the Air Warfare capable Destroyers will be critical in maintaining air control, particularly during times and in areas where aircraft are not continuously available, they are by no means the sole requirement to achieve sea control. A balanced surface combatant force is essential. The *Anzac* class frigates, which will complement the Air Warfare Destroyer, and which will be progressively updated to improve their self-defence capabilities, will equally need to be capable of working in the littoral environment as well as independently in the open ocean.

Maritime power is critical to Australia's national defence, given our enduring maritime geo-strategic circumstances. Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control. Major surface combatants, as part of a balanced fleet, provide this critical capability in close partnership with the Army and Air Force. The modern surface combatant remains an adaptable, flexible and potent instrument for the Government to apply to ensure continuous use of the sea and whenever and wherever diplomatic and/or military effect is desired.

Australian Maritime Doctrine, p. 39.

⁸ Bureau of Transport and Regional Economics (BTRE), Australian Trade Statistics 2002

¹⁰ Such as Brazil, Cape Verde, India, Malaysia, Uruguay

¹¹ Australian interpretation of 'due regard' is that it is the responsibility of the coastal state to inform maritime users of any resource issue that they should have due regard to in planning/conducting maritime operations in the EEZ of that coastal state.

¹² Indonesian Regulation 37 of 2002, which concerned the rights and obligations of foreign

concerned the rights and obligations of foreign ships and aircraft when exercising the right of archipelagic sea lanes passage through established archipelagic sea lanes, came into force on 28 December 2002.

¹³ E Grove, *The Future of Sea Power*, Naval Institute Press, Annapolis, 1990, p. 12.

⁴ Colin Gray, *The Leverage of Sea Power: the strategic advantage of navies in war*, New York, 1992, p. 43.

⁶ Sea Power Centre-Australia, Semaphore, Issue 8, 2003

⁷ G Till 'Maritime Trade Introduction' in G Till, Seapower at the Millenium, Sutton Publishing, 2001, p. 177.

⁹ Department of Foreign Affairs and Trade, Fact Sheet: Why Trade Matters, 22 Dec 02.

¹⁴ Sea Power Centre-Australia, Semaphore, Issue 9, 2003.

Sea Power Centre-Australia, Semaphore, Issue 2, 2002.

² Sea Power Centre-Australia, Semaphore, Issue 1, 2003

³ Royal Australian Navy, Australian Maritime Doctrine, Canberra, 2000, p. 39.

Freedom of the Seas

by Professor Geoffrey Till

Whether we like it or not, we are part of a thoroughly globalised trading system that significantly determines much of our destiny. Capital and information are now transmitted around the world electronically, rather than by shipping as used to be the case until the latter stages of the industrial revolution.

Nonetheless, merchant shipping is still an essential enabler to that system partly because great bodies of water divide the world's trading blocks and partly because it is easier, safer and cheaper to send goods by sea than by any other means. Sea-based trade, in other words, underpins the world economy and will surely continue to do so. Measured in weight and volume, 90% of world trade still travels by water. Estimates vary, but global trade looks set to expand by several per cent per year for the foreseeable future. The problem is though, that sea transportation costs have been drastically reduced over the past decade or so, but at the price of a tight 'just-enough-just-intime' philosophy that makes disproportionately vulnerable to local shocks.

Defending that trade, and regarding the sea as a great manoeuvre space for the peaceful transfer of capital, goods and people around the world on the one hand, and as a means of defending the system on the other is second nature to the world's major navies. At the heart of these assumptions is the belief in free navigation. Thus Admiral Jacky Fisher at the beginning of the last century:

The Admiralty should never engage itself to lock up a single vessel even - not even a torpedo-boat or submarines- anywhere on any consideration whatever. The whole principle of sea fighting is to be free to go anywhere with every d---d thing the Navy possesses. The Admiralty should ... reserve entire freedom of action.

The greater their freedom to regard the world ocean as an unimpeded manoeuvre space from which navies can project diplomatic and military power ashore, the

¹ Letter of 8 April 1910. Admiral of the Fleet Sir John Fisher, *Records*, Hodder & Stoughton, London 1919. Emphasis in original. traditional argument goes, the easier can they help defend the system. Restrict those rights, and you may reduce naval effectiveness, and increase the vulnerability of the system.

Nonetheless, this belief is under increasing threat threats - and perhaps should be. The stimulus for this are the discussions currently going on between the RAN, the USN, the RN and others about the right to stop and search ships on the high seas that might be purveying material related to weapons of mass destruction around the world ocean.

Why the freedom of the Seas?

As far as most people are concerned it all began with the Dutch jurist Hugo Grotius in his *Mare Liberum* of 1609. Actually he was by no means the first to assume that the sea belonged to no one and that everyone had a right to sail about it unimpeded. Such beliefs can be traced back to the Roman Empire at the very least.

He argued that the sea was first a limitless resource and second an essential means of transportation for the purposes of the trade on which the world's prosperity and peace depends. Accordingly the ability to use the high seas freely has for centuries been regarded as an essential right. People cannot live on the sea indefinitely; it is inherently different from the land. The concept of owning the sea was therefore a contradiction in terms.

But against that there was the equally brilliant English Jurist John Selden. His view was that bits of sea were worth owning and therefore were capable of being owned - perhaps because of the fish stocks that could be found there, or because they allowed the exertion of decisive power ashore or because control of the transportation routes that passed through them was commercially or strategically valuable.

These two largely complementary traditions have operated side-by-side. Indeed Selden pointed out that Grotius sounded like him, later on, when he was trying to help his Dutch masters keep the English out of the East Indies spice trade! These days the Selden tradition has resulted in expanded territorial seas, and the Exclusive Economic Zone; the Grotius

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tradition in the defence of free navigation through both of these and the continuing defence of freedom on the high seas outside them. Both these traditions seem likely to continue to coexist in the 21st Century, but for a variety of reasons, the balance between them seems likely to shift.

Why then the coming change?

There seem to be four reasons for this: diminishing resources, the death of distance, safety and preservation, and the common heritage of mankind.

Diminishing Resources

Medieval mariners used to talk of an ocean that was brilliantly clear and sparkling, cleaned by trillions of shellfish and teaming with fish. Early arrivals in the Western Atlantic had only to lower baskets into the sea and haul up all the fish they could eat. Grotius' argument reflected the then fact that the resources of the sea (especially fish) were limitless and the consequent assumption that the sea could therefore be used by one country without reducing its value for anyone else.

Manifestly, centuries of over fishing mean that this is no longer true. The sea's resources are limited. Your fish take, reduces mine. Accordingly, the main plank of this part of Grotius' argument falls away. Of course this is not entirely new. Today's bans on wall-of-death drift net fishing in the Pacific Ocean echo much earlier limits on activities such as sealing. But regulation of this sort will surely grow, simply because the resources themselves are both more important and under much great threat than they used to be.

The current controversies about the future of whaling again illustrate the fact that what countries can do, commercially on the open ocean is being increasingly regulated. By agreement, perhaps, but still regulated.

The Death of Distance

Technology effectively determined the extent of the sea areas that countries could justifiably regard as their own. Traditionally, this was the sea area that could be covered by shore based cannon. With a following wind this could be as

² For example the Sealing Convention Treaty of 1911 between Russia, Britain, Japan and the United States much as three miles, and became the usual measure of the territorial sea.

However in more recent times, the reach of shore-based technology has extended so much that to some extent at least, it covers the entire ocean. With satellites and patrolling UAVs, the surveillance is under ocean to unprecedented degree. This does not mean that the ocean has ceased to be a place in which naval forces can hide but it does mean that its surface at least is much less of an unknown desert than it used to be. Modern technology allows the countries that have the necessary technological and military capacity to extend their influence over the open ocean.

Not only can developed nations exert more influence over the open ocean than they used, but they will also need to more. They and their interests are less insulated and more threatened from the sea than they used to be. These seabased threats range from illegal immigrants, through international terrorism to the possibility of physical attack from the sea.

As a result, the high seas have shrunk not just in a literal way with the extension of the territorial sea, but metaphorically too, because the processes of globalisation mean that geographic distance matters so much less than it did. In the *Tampa* affair, for example, Australia found itself dealing with migrants fleeing from a conflict in Afghanistan in which a terrorist group led by a Saudi national was attacked by an American-led international coalition involving countries as far apart as Japan and Denmark. The war against terror seems likely greatly to reinforce an existing trend towards limits on total freedom of navigation on the high seas.

Freedom of navigation, in short, depends on the suppression of other people's freedom to misuse or interfere with it. This in turn requires maritime powers to accept limitations on their freedoms as well. Significantly it is the United States until recently the supreme exponent of the freedom of navigation, that is taking the lead in this. People are beginning to qualify freedom of navigation by stressing that it must be for legitimate purposes.

This is not, of course, completely new either. Because pirates have always been seen as the enemy of all mankind (hostis humanis generis) it has become widely accepted that their suppression warrants interference with ships on the high seas flying the flags of other

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states. But now such constraints apply more widely.

Safety and Preservation

Reinforced by the 1998 Year of the Oceans, and more concern about environmental fragility of the open ocean, littoral seas and the coastline. The ocean is in trouble, and this will surely lead to increasing regulation on what people may or may not do at sea. More and more people are thinking that we, and their owners, ought to be able to keep closer track of merchant vessels, less they pollute, sink or be attacked by pirates. Perhaps they should be fitted with transponders continuously providing details of their position, course, cargo, destination and general state and that they be treated like airliners, being handed from one sea traffic controller to another.

All this seems likely to affect warships too, especially in restricted areas such as the Black Sea and the Mediterranean. It also means more pressure on navies and coastguard forces moving into the business of guarding the ocean.

The Common Heritage of Mankind

The common heritage of mankind signifies a fourth and potentially quite profound shift in attitudes to the sea - a fundamental reinterpretation of what the ocean as a global commons actually means. This increasingly reflects a sense that the freedom of the seas does not merely connote their being outside jurisdiction and so free for everyone to use. Instead, the ocean is regarded as a common domain belonging to everyone, including future generations as yet unborn. Instead of being the object of a free-for-all where those who can, have the licence to do what they want, the sea is regarded as a huge area of shared sovereignty and agreed regulation on current and future use, in the common interest of all mankind, present and future. In short, the high seas are increasingly seen as belonging to everyone, rather than to no one.

Future Implications?

All this really conflicts with traditional notions about what is distinctive about naval operations. According to Corbett, after all the distinctiveness of naval strategy, and what set it apart from the strategy of land warfare was that the sea cannot be the subject of political

dominion or ownership. We cannot subsist upon it...nor can we exclude neutrals from it. Working out how they should respond to all these probable infractions on traditional thinking about the freedom of navigation the freedom of navigation is likely to be a major feature in strategic thinking for the navies of the 21st Century.

Of course on the one hand it might be argued that these developments are either not likely to take place or to have the restricting effects on their capacity to use the sea as a means of projecting military and diplomatic power ashore that great maritime powers like the United States so value. The compromises arrived at in the long development of the Law of the Sea amply illustrate the ability of the great maritime powers to get their conceptions accepted. But what may prove crucially different about the present situation is that it is within those same maritime powers that so many pressures for a re-think are actually coming, whether for resource, commercial, environmental or strategic reasons. If he were aware of this, Admiral Jacky Fisher would certainly turn in his grave.

About the Author

Professor Geoffrey Till is the Dean of Academic Studies at the Joint Services Command and Staff College and is Head of the Defence Studies Department, which is a part of the War Studies Group of King's College London. In addition to many articles and chapters on various aspects of defence, he is the author of a number of books including Air Power and the Royal Navy (1979); Maritime Strategy and the Nuclear Age (1984); Modern Sea Power (1987); and, with Bryan Ranft. The Sea in Soviet Strategy (1989). More recently he has edited Coastal Forces (1994), Sea Power: Theory and Practice (1994) and Seapower at the Millennium (2001). His latest book is The Challenges of High Command: the British Experience with Gary Sheffield, and he has just completed a major study Seapower: A Guide for the 21st Century for Frank Cass, to be published later in 2003.

³ Julian S Corbett, Some Principles of Maritime Strategy, (Edited by Eric Grove) Brassey's, London, 1988, p. 336.



Shiphandling Corner

The Adelaide Class FFG - Part I

Edited by Captain Ray Griggs, CSC, RAN

In this article we return to

shiphandling in the various ship classes in the RAN. The FFG remains, for a few more months at least, our largest class of Major Fleet Unit - it has a unique shiphandling and propulsion arrangement which make it extremely handy and, in the right hands, a delight to watch. In this and the next edition, you will see an edited version of a paper was produced by an experienced 'steam' shiphandler whose first experience in an FFG was in command. Part I focuses on the shiphandling infrastructure of the ship and some basic handling characteristics. Part II will look in more detail of a number of shiphandling evolutions.

The FFG has been in service with the RAN since 1980. Since that time we have amassed quite a deal of corporate experience in their handling, some of it published, some not. This article brings together advice published previously both within the RAN and by USN sources and some thoughts that have not been previously published about handling these remarkable ships. The ideas in this paper are not all there is to know about handling FFGs; there are bound to be many other tricks to the art and like all shiphandling activities, every case will be different. A recurrent theme is that careful, detailed planning is the secret to successful shiphandling in the FFG, as it is in any class of ship. It cannot be stressed too much that such planning must take account of things that may go wrong unexpectedly and escape routes must be identified. If the shiphandler is properly prepared, driving the FFG can be a real pleasure and a very rewarding experience professionally.

Size and Dimensions

A feel for the size of the FFG is an important first step to successfully driving one. This is a big ship for a frigate, very close in overall size to a DDG. On the bridge your height of eye is about 40 feet (12m). Making headway, the pivot point is at about the Bridge/Combined Antenna System dome. In front of you is about 135 feet of bow to the stem (42m, the length of a Fremantle class patrol boat), and astern the ship stretches 317 feet (96m, almost a rugby field, almost the length overall of a DE/Anzac). The draught forward is 22 feet (6.5m) to the keel-mounted, pressurised rubber sonar dome, which is below a point just aft of the capstan. Aft, where the single, five bladed, 16.5 foot (5.3m) diameter controlled pitch propeller is the lowest projection in the ship, the draught is 24.5 feet (7.5m). The FFG beam is average for a warship of this length; 47 feet (14.3m). Looking over the stem from the bridge, the water is 400 feet (123m) ahead; through the centre-line fairlead it is 260 feet (79m). Although relatively deep draught because of the propeller, the FFG has a great deal of windage in relation to its draught because of high freeboard and slab sided superstructure.

Main Propulsion

The FFG is powered by two GE LM2500 gas turbine engines, giving a total of 40,000 shp. They are connected through synchronised self-shifting clutches to a double-reduction gear box. This simple, reliable clutch system automatically engages the gas turbine to the reduction gear when the engine comes on line, and disengages it when the engine is shut down. There is no mechanical link between the jet engine part of the gas turbine (the gas generator) and the gear box. Power is transmitted by air coupling - putting another turbine wheel, the power turbine, in the exhaust of the gas turbine.

All this is very important to the shiphandler. Firstly, it means that when a gas turbine is on line, the propeller is always

rotating and therefore there is always a paddlewheel effect pushing the stern to starboard. The propeller rotates clockwise when viewed from astern. This contributes to the ship having a tighter turning circle to port than to starboard. It is possible however, because of the air coupling, to stop the shaft rotating by applying the shaft brake. There are some rules to be remembered about using the shaft brake:

- The shaft brake can be engaged for a maximum of 14 minutes continuous.
- It should not be used more than six times in one hour, to prevent excessive heat build up.
- Shaft speed must be below 75 rpm, Propulsion Control Lever (PCL) at stop, pitch at zero and the brake can only be engaged at the station that has control of the engines (Bridge, Central Control Station - CCS, or Local Operators Position - LOP).

Secondly, astern power can be applied very rapidly, especially at slow speeds. All that needs to occur is for the pitch on the propeller blades to be reversed; there is no need to stop and reverse rotation of the shaft as in conventional steam or diesel powered ships. From 5kt ahead to 5kt astern takes about 10 seconds and an FFG can be stopped in the water from full speed ahead in about 55 seconds or three ship lengths, a very dramatic demonstration.

One engine gives power for 24 knots ahead and 15kt astern, two engines about 28-29kt ahead and 15kt astern. When at idle with the PCL at stop, the shaft will rotate at 40 rpm on one engine and 60 rpm on two. Single engine cruising is about 25% more efficient than using two engines. An engine can be brought on line from cold in under 10 minutes. An important feature to be aware of is that when shutting down or bringing a second engine on line, a drop in speed of 2-3kt from that ordered will occur, lasting for about 5 minutes while compensation is made for the changed engine loading. This needs to be planned for in close station keeping situations, especially when the guide.

Main Propulsion Control

The main engines can be operated in:

 Programmed Control - when the PCL provides computer driven control of propeller pitch and shaft rpm to achieve the ordered speed, or Manual Control - when pitch and shaft rpm are controlled manually by separate levers. This form of control is available only in CCS (remote manual) or the LOP (local manual), not on the bridge.

In addition, Programmed Control has two modes, Speed and Power. Speed Mode maintains constant shaft rpm and hence nearly constant speed by allowing the gas turbines to adjust speed. Log speed will more closely correspond to PCL settings in speed mode but this is the less fuel efficient mode. It is used for Replenishment at Sea (RAS) and close station keeping when constant speeds are required and is also useful when conducting boat transfers at slow speeds in a sea state because it prevents engine hunting. Power Mode is more economical and is used for normal operations. The turbine is fed a constant fuel supply and will not respond to the effects on the ship of wind, sea and swell. Power mode will lead to engine hunt at speeds below 6kt.

Rudder

The FFG has one very large balanced rudder, slightly offset to starboard of the ship's centreline. This feature allows the shaft to be withdrawn without removing the rudder. It also contributes to the ship's ability to turn tighter to port. FFGs will normally carry about 3° of starboard wheel to maintain a steady course. The lower extremity of the rudder is below the line of the shaft.

Auxiliary Propulsion Units (APU)

Two retractable APUs are fitted, one either side of the centre-line, immediately under the bridge (Frame 100). These are 325 horse power electric motors driving 36 inch diameter propellers shrouded in a Kort style nozzle. The propellers have no speed adjustment; they are either on or off, and they cannot be reversed. They can however be trained independently of one another through 360° to provide thrust in any direction. They take about 5 minutes to extend and retract. During raising and lowering, speed through the water must not exceed 5kt but once fully lowered, they can withstand ship speeds up to 8kt. In the Special Sea Dutymen situation, running APUs requires three Ship Service Diesel Generators on line for immediate redundancy in the event one fails but at sea only two are needed. In benign conditions, the APUs will give a ship speed of

about 4kt but this falls off rapidly as wind/sea effect increases.

Mastering the APUs requires that the shiphandler understand that they will push the pivot point of the ship in the direction they are trained. Think of them as two small torpedos if trained to port, the ship will move to port and vice versa. When only one APU is energised, the optimum affect is obtained by using the APU on the opposite side to the direction of the required force, so that the propeller wash is not fouled by the other APU (if the bow is to be moved to starboard, train the port motor to starboard). Using APUs in conjunction (both energised and trained to the same bearing) is very effective in most berthing situations, more so than a single APU trained further abeam (one motor trained green 90 will give a smaller green 90 vector than two motors trained green 120 - more on this later). Training both motors in unison is also simpler for the new FFG shiphandler while experience is being gained. There are some rules to remember when using APUs:

- Do not exceed three starts in rapid succession or six starts per minute with less than a five second off period between starts.
- Do not start both APUs together.
- Running APUs tail to tail, nose to nose or nose to tail (between red 60 and 120 and green 60 and 120) will damage them. They may be positioned this way but only one may be energised at a time.
- APU effectiveness is reduced in shallow water and when the ship is riding high by the bow (ie, no ammunition or fuel).

Stabilisers

FFGs are fitted with fin stabilisers sited aft of the small bilge keels, about centrally between the main mast and the Single Target Illumination Radar. They extend about three feet below the keel line but not beyond the perpendicular down from the water line. The stabilisers activate above 6.5kt log speed when the ship is accelerating but do not become fully effective before about 12kt of ship speed. They shut down at 5kt when decelerating. They must be locked when going astern at speeds over 6kt to avoid damaging them. They are very effective, reducing ship motion by up to 65% and they consequently improve operational flexibility by allowing flying and RAS operations to be conducted safely in quite

rough weather. They do not appear to affect the ship's turning ability but they can be used to some effect to steer the ship when rudder control is lost, by locking one and manipulating the other.

The Hull

There are some very important features about the hull that the FFG shiphandler must constantly keep in mind. The first is the very large sail area already mentioned. The other key features are:

- relatively thin hull plating
- · masker bands, which are easily damaged
- the RAS gantries on the after screen extent beyond the ship's side slightly
- flight deck nets that are proud of the hull and easily damaged by badly placed tugs or berthing incidents, the result being that flight deck certification is lost (no flying operations) until they are repaired and load tested
- lots of sharp angles along the hull and superstructure to chew a nested ship if the shiphandler is not careful; the bridge wings and hangar sides are most vulnerable.

Berthing Lines

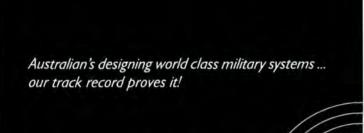
FFGs use the standard destroyer berthing line layout of six lines, which should be arranged depending on individual berths so as to provide two springs and a breast forward and aft. The powered capstans forward and aft are a great asset to the shiphandler in line handling. Manning for part-of-ship work is limited in an FFG so, when berthing or leaving a wharf, a good technique to overcome this problem is to limit the working lines to four only, two at each end. (Ed - what constitutes limited manning is a matter of perspective) The last two lines can either be cast off early, or passed ashore after berthing, when manpower is more available. The choice of which lines to work needs to be made carefully and in advance. If there is a howling wind blowing off, breasts will be important but not if the wind is blowing on. The key is careful, detailed planning. This technique allows for sufficient manpower to be allocated to handling the four working lines, rather than not quite enough on all six; the result is a safer evolution.

There is another aspect of berthing line use that the FFG shiphandler needs to consider very carefully. Having berthed the ship, it will

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most likely be in what is referred to as the balanced state; APUs astern and running to counter the main engine ahead to provide wash over the rudder and hence control of the stern. More on this in detail later. The critical issue. having successfully berthed, is when to power down or shut down the three sources of thrust. Engine response is slower than APU response and this complicates the issue. The secret is to leave the power on and the ship balanced until weight is on at least one back spring and one fore-spring. Taking power off fairly swiftly (in the sequence engine down by half the ordered speed, stop one motor, stop engine, stop the other motor) can be done without danger that the ship will surge along the berth and possibly cause an impact at some unprotected point. Minor damage has been inflicted on many occasions by FFG shiphandlers not paying attention to this important part of the process.

In Part II we will take a closer look at specific shiphandling evolutions.





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BOOK REVIEWS



Terrorism, Afghanistan, and America's New Way of War

by Norman Friedman Naval Institute Press, 2003 Hardcover, 327 pp, illustrated, RRP US\$29.95



There will be few (if any) readers of the *Journal* who have not heard of Norman Friedman. With his very powerful intellect, he has spent over twenty influential years on the inside of US military, maritime and strategic policy. Friedman's

analytical capacity, knowledge and experience are also the attributes that have made him an award-winning author of nearly thirty books, including *Desert Victory* (the 1990-91 campaign against Iraq), *Seapower as Strategy*, and *The Fifty-Year War* (on the Cold War: RUSI's 'best English-language military book in 2000).

Terrorism, Afghanistan, and America's New Way of War is somewhat different from Friedman's other recent offerings. The issue of terrorism is still evolving, Afghanistan isn't exactly a done deal, and at the time of his writing, the latest campaign in Iraq was still only a sparkle in Rumsfeld's eye. This is real-time, here-and-now, politically-charged analysis. I suspect it is also fair to say that Friedman is not as close to the centre as he used to be. In his previous publications, the notes pages were essential reading because they gave one the sense of accessing first-hand information and insider views. But in Terrorism, Afghanistan, and America's New Way of War the notes draw almost exclusively upon newspapers and journal articles, revealing the real sources of much of the book. While I understand the constraints, anyone with an interest in the War on Terror has therefore read the same things - we all have access to newspapers. Perhaps this is why some critics have argued that there really isn't anything new here. But if one knows what to look for, vintage Friedman can still be found.

Friedman's encyclopaedic knowledge enables him to draw upon the lessons of history and come up with an historical analogy or precedent for almost any situation. This helps put the new way of war and recent operations into their proper perspective. Moreover, *Terrorism, Afghanistan, and America's New Way of War* encompasses a whole range of interconnected and complex issues, and does a good job of collating it all together, trying to make sense of it, and raising some interesting issues and insight.

For example, I found it interesting that Friedman isn't a big fan of the centre of gravity theory. Reflecting on the initial air campaign in Afghanistan, which was based on the idea that attacking a few key targets could and would be decisive, Friedman has one thing to say... It failed. Indeed, US strategy only became successful when substantial ground forces were added. On the other hand, I was encouraged to read that even though Afghanistan is about as far from the sea as a potential battlefield can get, Friedman believes that the ability to reach it from the sea was decisive and that from a US perspective, the war was largely maritime in that so much of the force engaged came from the sea.

Network Centric Warfare (NCW) has been receiving a lot of attention in Australia in recent months. Since its Australian debut in CDF's vision for the future force (FORCE 2020) almost a year ago, NCW has generated widespread interest. From conferences to roadmaps to wargaming, NCW is the latest big-picture concept. We would be well advised therefore to learn as much as we can from the US NCW experience, and Afghanistan, says Friedman, provided a practical test of network-centric theory in its pure form.

Warning of the potential flaws of NCW, Friedman notes that providing more information can go two ways. Firstly, it can be used as advertised to decentralise decision making and thus speed up combat, or secondly, it can go to senior officers who can see details of tactical operations on a scale previously impossible and may well become obsessed with those details. Well, now we know the

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answer - Predator video was generally sent, not to troops on the ground, but to Bagram and Tampa. UAV real-time video was even sent to the Pentagon, where high-level officials and senior decision-makers were distracted from the broader issues of the war. Cynics will say I told you so, but the rest of us can consider ourselves forewarned...

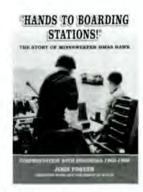
Finally, I found it somewhat amusing that at the end of the day it was actually the urgency that Bush imposed, that led to the supposed new way of war as seen in Afghanistan. When it was first decided to attack Afghanistan, General Tommy Franks' initial reaction was reportedly to demand three Army divisions, but with Bush pressing for action the only troops he could move quickly enough were Special Forces and Marines. He was ordered to make do with a fraction of the force he wanted and voila! - America's new way of war.

As we've come to expect from Norman Friedman, his almost conversational style of writing and grasp of the key issues makes for a very engaging and easy read. *Terrorism, Afghanistan, and America's New Way of War* will appeal to the experienced professional as much as the technophile and casual reader. I have no hesitation in recommending this book.

Reviewed by Doug Steele

Hands to Boarding Stations: The Story of Minesweeper HMAS Hawk

by John Foster
Australian Military History Publications 2003
available from the publishers via their website www.warbooks.com.au)
hardcover, illustrated, 125pp, RRP \$39.00



Hands to Boarding Stations is written by the former Commanding Officer of HMAS Hawk and details the ship's service in Southeast Asian waters during Confrontation with Indonesia in 1965-66. The book is an excellent read for the avid naval historian, ex-RAN personnel of the 1960s or anyone interested in the role played by the Navy in Confrontation. The story follows the ship's history from preparing to leave Australia for Southeast Asia, deployment to Singapore and subsequent operations in Singaporean and Malaysian waters off Sabah and Sarawak. It is an easy to read and extremely well written account (and liberally illustrated with photographs, charts and drawings) of the activities of the ship and her crew in their deployment to the war zone. Confrontation has become to many another forgotten war due to the perception of a low level of combat activity. Hands to Boarding Stations shows that in reality this was not the case with lengthy and at times intense patrolling of the waterways between Singapore/Malaysia and Indonesia in the search for insurgents, and with the frequency with which RAN vessels were engaged by Indonesian shore batteries. That no RAN personnel were killed due to this hostile and often accurate firing is surprising. The book also details the events surrounding the incident onboard Hawk when one of her own crew ran amok with an Owen Gun, firing over 300 rounds at the ship and his shipmates.

Reviewed by Lieutenant Commander Greg Swinden, RAN

Christmas Island, Indian Ocean

by Julliette Jameson ABC Books, 2003 paperback, RRP \$24.95,

Christmas Island, Indian Ocean provides a fascinating and very personal perspective on the events that gripped the country in the last four months of 2001 and early 2002. It is an account of an intense three month period that the Sydney based journalist spent on Christmas Island in late 2001. Her journey to the island was inspired by the Tampa crisis and the resulting book is part autobiographical and part social history and commentary.



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Jameson takes us on her journey through a short but profoundly important period of Australian history that will be remembered in many different ways. To a large extent the jury is still out on this phase of our national story and is likely to be so for many years to come. Jameson captures the perspectives of both Island locals and visitors alike during a time of unprecedented local activity and does so with grace and remarkable balance. Many of the characters are well known to those of us who have spent respectable amounts of time in and around the island.

So what has this to do with readership of this *Journal*? Apart from being another documented perspective on some quite different aspects of Operation *Relex I*, a useful contribution in itself, this book serves as an excellent example of the impact of naval presence. The Navy is a constant thread running through the book which shows how critical Navy's interactions with the community are in promoting an understanding of what we do. Apparently Jameson had had little contact with the Navy before she arrived on the island. By simply reading the foreward we can see how profound an impact the presence of a ship and her company can make on an observer and the respect Jameson now has for the Service. Well worth a read.

Reviewed by Captain Ray Griggs, CSC RAN

Zeebrugge

By Barrie Pitt Cassell Military Paperbacks 2003 RRP \$19.95, 239pp.

The latest book to join the popular Cassell Military Paperback series is Barrie Pitt's classic account of the raid by British warships on the Belgian ports of Zeebrugge and Ostend during World War I, first published in 1958.

The objective of the raid on 23 April 1918 was to sink blockships in the mouth of the Zeebrugge-Bruges Canal and in the entrance to Ostend harbour, sealing off access to the English Channel for the U-boats, destroyers and light forces based there and in the inland harbour at Bruges, where they were invulnerable to attack from the sea. The British crews, led by the controversial Vice Admiral Roger Keyes, who had previously been Chief of Staff during the Dardanelles campaign, were all volunteers, highly trained and ready to fight. They nonetheless knew that they were unlikely to survive the firestorm from the German shore batteries and Keyes made it clear to them that they should not expect to come back.

Unfortunately the operation, which was intended to prevent the German's from using these ports as bases for offensive English Channel operations, provided only a mild inconvenience for the enemy and had little strategic effect, being described as the ultimate example of heroic failure. The failure at Ostend was complete, while at Zeebrugge, the German's soon circumvented the obstructions and the U-boats and destroyers continued to operate through the summer of 1918.

The psychological effect of the raid was, however, considerable and it was viewed as a clear demonstration of British offensive spirit and courage at a time when the situation on the Western Front was tenuous. The story of the raid was thrilling and cheered not only the British but the Allies as well. In that one brief morning, before breakfast, eleven men won the Victoria Cross, 21 the Distinguished Service Order, and 29 the Distinguished Service Cross, among many other awards. The cost, however, was high: 170 killed, 400 wounded and 45 missing. Keyes, the hero of the hour was made a baron.

Barrie Pitt's thorough account of this courageous and heroic exploit, which deserves its place in history not for its failure but for its inspiration, records in graphic detail the preparation and execution of the raid, and is brilliantly told. It draws attention to the complexity of the operation and the courage of the men involved, and in particular, Pitt shows the importance of decisions taken by men on the spot and under fire when carefully laid plans go wrong. Although not the latest book on the subject, it remains a classic work and is arguably the best account of the gallant events that unfolded on St George's day 1918.

Reviewed by Captain Allan du Toit, RAN



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