Papers in Australian Maritime Affairs

No.12

Australian Maritime Issues 2004

SPC-A Annual

Edited by
Glenn Kerr
SEA POWER CENTRE - AUSTRALIA

NAVY

Australian Maritime Issues 2004 | SPC-A Annual | Glenn Kerr

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SPC-A ANNUAL

National Library of Australia Cataloguing-in-Publication Entry

Australian maritime issues 2004: SPC-A Annual.

ISBN 0 642 29599 9.

1. Sea Power - Australia. 2. Navies - Australia. 3. Australia - Defence. I. Kerr, Glenn. II. Title. (Series: Papers in Australian Maritime Affairs; no. 12).

359.00994

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The Sea Power Centre – Australia (SPC-A—formerly the Maritime Studies Program) was established to undertake activities which would promote the study, discussion and awareness of maritime issues and strategy within the RAN and the defence and civil communities at large. The aims of the SPC-A are: to promote understanding of Sea Power and its application to the security of Australia's national interests; to manage the development of RAN doctrine and facilitate its incorporation into ADF joint doctrine; to contribute to regional engagement; and, within the higher Defence organisation, contribute to the development of maritime strategic concepts and strategic and operational level doctrine, and facilitate informed force structure decisions.

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Papers in Australian Maritime Affairs

The 'Papers in Australian Maritime Affairs' series is a vehicle for the distribution of substantial work by members of the Royal Australian Navy as well as members of the Australian and international community undertaking original research into regional maritime issues. Papers will be drawn generally from manuscripts not scheduled for publication elsewhere but that nonetheless merit extensive distribution. Candidates are considered by an editorial board under the auspices of the Director of the Sea Power Centre – Australia.

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Mr Mark Bailey

Mark Bailey joined the Royal Australian Naval College in 1979 as a Seaman officer, undertaking the Creswell Course. He subsequently served aboard the carrier HMAS *Melbourne*, HMAS *Tobruk*, HMAS *Yarra*, HMAS *Brunei*, and the training ship HMAS *Jervis Bay*. He also served on the training staff at HMAS *Creswell*, as well as fulfilling security and intelligence functions in Navy Office, and holding a number of joint staff positions. The latter included planning and execution of the *Kangaroo* series of exercises, sparking an interest in how major military activities are sustained. He undertook the RAN Staff Course in 1993. After this he specialised in intelligence at the Maritime Intelligence Centre and Joint Intelligence Centre before transferring to the RAAF as an Intelligence Officer in 1997. After returning from Malaysia in 2001 he formed part of the Theatre Battle Management Core Systems implementation team in Headquarters Air Command. In 2002 he joined the Australian Public Service, as a strategic logistics analyst in the Strategic Logistics Branch. Mr Bailey has published articles on the Imperial Japanese Army's transport submarine fleet of WWII and has researched and written extensively about the Imperial trade system, its performance, management and protection in the global wars, and Australia's role in that system. Mr Bailey holds a Diploma of Applied Science, a Bachelor of Arts, and a Master of Defence Studies. He is currently a Squadron Leader in the RAAF Active Reserve.

Mr Aiden Collie

Aiden Collie joined the Department of Defence in February 2003 as a member of the Graduate Entry Program, after completing a Bachelor of Arts (Communications/International Relations) (Honours) at the University of the Sunshine Coast and a year teaching English in Japan. On completion of the program, Mr Collie joined the International Policy Division in December 2003 as a Policy Officer.

Commodore Alan Du Toit, RAN

Commodore Allan du Toit, was raised and educated in South Africa and entered the South African Navy as a Midshipman in 1975. He is a mine warfare sub-specialist and Principal Warfare Officer, and served mainly at sea in frigates and mine countermeasures vessels before moving to Australia in early 1987, where he accepted a commission in the Royal Australian Navy. His operational

experience has included command of HMAS *Tobruk* during Operation BEL ISI in Bougainville in 1998, and most recently, RAN Task Group Commander in the Persian Gulf between November 2001 and March 2002 as part of Operation SLIPPER—Australia's commitment to the International Coalition against terrorism. During this deployment, he also became the first non-US Navy officer to command multinational Maritime Interception Operations in the Gulf since UN sanctions against Iraq first began in 1991. In addition to commanding HMAS *Tobruk*, his command appointments have included Commander Amphibious Task Group (2001-02) and inaugural Commander Australian Navy Amphibious and Afloat Support Force Element Group (2000-01). He has also previously served as Project Officer for the billion-dollar Minehunter Coastal Project (1993-1996), and as the Director of Navy Strategy and Futures. He is currently serving as the Director-General of Navy Capability, Performance and Plans at Navy Headquarters. Commodore du Toit is a graduate of the South African Navy Staff College (Junior Staff and Warfare Course), the RAN Staff College and the Australian Joint Services Staff College. He holds a Bachelor of Military Science and a Master of Defence Studies. He is a keen naval historian and an avid student of international naval developments and maritime strategy and has written two books on warships and naval history. He is also a regular contributor to various naval journals.

Mr Matthew Flint

Matthew Flint joined the Department of Defence in February 2003 as a member of the Graduate Entry program, after completing a Bachelor of Asian Studies (Indonesian) (Honours) at the Australian National University. On completion of the program Mr Flint joined the International Policy Division in December 2003 as a Policy Officer.

Mrs Rachael Heath

Rachael Heath joined the Department of Defence in February 2002 as a member of the Graduate Entry program, after completing a Bachelor of Arts (Honours) at the Australian National University, majoring in sociology. On completion of the program Mrs Heath joined the Sea Power Centre – Australia in December 2002 as the Staff Officer (Research).

Commander Peter Leavy, RAN

Commander Leavy joined the Royal Australian Naval College in 1984 and transferred to the inaugural graduating year of the Australian Defence Force Academy in 1986. After initial Seaman Officer training, he was posted to USS *Brewton* and HMAS *Hobart* for Phase 2 training before completing his

Phase 3 training and joining the commissioning crew of HMAS *Westralia*. After being awarded his Bridge Watchkeeping Certificate, he was posted to HMAS *Perth* where he served as an Officer of the Watch before commencing Principle Warfare Officer (PWO) training in 1993. After graduation, Commander Leavy served as a PWO in HMAS *Swan* before completing PWO Phase 2 training in 1995 and then being posted as the Anti Submarine Warfare officer in the commissioning crew of HMAS *Anzac*. In 1998 Commander Leavy assumed duties as the Officer in Charge of the RAN Tactical Electronic Warfare Support Section at HMAS *Albatross*, where he was involved in support to ADF operations in East Timor. Following this posting, he joined HMAS *Darwin* as the Executive Officer in April 2000, before completing the Australian Command and Staff Course in 2002. He assumed his present position as the Deputy Director Future Maritime Warfare in January 2003. In February 2003 he was seconded as the Chief of Staff to Commander Task Group 633.1 operating in the North Arabian Gulf during Operation FALCONER. Commander Leavy holds a Bachelor of Science (Hons), Master of Arts (Maritime Policy) and a Master of Management (Defence Studies).

Lieutenant Commander Glenn Kerr, RAN

Lieutenant Commander Kerr joined the Royal Australian Naval College in 1984 as a Supplementary List Supply Midshipman. After completion of supply training in 1986 he served in a range of supply, capital procurement and logistic support postings. On expiration of his Short Service Commission in 1993, he was transferred to the Naval Ready Reserve. During the following five years he undertook wide-ranging duties in supply, training support, naval strategic policy, and garrison support contract management. In 1998 he was transferred to the Active Reserve, serving as Staff Officer to the Chief of Navy and in naval strategic policy. Since re-entering the Permanent Naval Forces in June 1999 he has been employed in naval personnel policy and as Staff Officer to the Vice Chief of the Defence Force. He was posted as the Research Officer at the Sea Power Centre – Australia in January 2003. Lieutenant Commander Kerr is a graduate of the RAN Staff Acquaint Course, for which he received the Lonsdale Medallion in 1998, and the inaugural Australian Command and Staff Course in 2001. He holds a Bachelor of Arts, Bachelor of Science, Master of Education and Master of Management Defence Studies, and has recently completed the requirements for a Master of Maritime Studies. He is currently undertaking PhD research in education at Deakin University, examining the potential role of popular visual literary genres in post-modern military education and training curricula.

Commodore Jack McCaffrie, AM, CSM, RANR

Commodore McCaffrie joined the RAN as a Midshipman in July 1966. After aviation training in the USA and Australia, he qualified as an Observer in 1968. Most of his flying career was spent in S2E/G Grumman Tracker aircraft operating from HMAS *Melbourne* and NAS Nowra. In the mid-1970s he also flew in Sea Kings with the 814 Squadron Royal Navy, from HMS *Tiger* and RNAS Prestwick, and worked at the Royal Aircraft Establishment, Farnborough. In the early 1980s, he began a succession of staff postings, serving as Deputy Director and Director of Navy Force Development in 1984-5 and 1986-88. He served as Executive Officer of HMAS *Cook* and Commanding Officer of HMAS *Harman*, the RAN communications station and support centre in Canberra. On promotion to Captain, he became the Director General Facilities-Navy, responsible for the Navy's infrastructure construction projects, including the Fleet Base, HMAS *Stirling*. From September 1993 until October 1996, he headed the Navy's Maritime Studies Program, now the Sea Power Centre – Australia. This brought him into contact with navies and academic institutions throughout Asia. He then worked for the Chief of Navy, managing implementation of the recently introduced Defence Efficiency Review reforms. On promotion to Commodore, he took over the Strategy and Management Branch in Navy Headquarters. Before retiring in February 2003, Commodore McCaffrie spent his final three years in the RAN as the Naval Attache, Washington. Since retirement he has taken up a part-time position as Visiting Naval Fellow at the Sea Power Centre – Australia. He is a graduate of the RN Staff College (1976) and the US Naval War College (1986). He holds a Bachelor of Arts and a Master of Arts (Strategic Studies). In 1993, he also spent six months as a visiting associate at the Institute of Southeast Asian Studies in Singapore.

Captain Richard Menhinick, CSC, RAN

Captain Menhinick joined the Royal Australian Naval College at Jervis Bay, in January 1976. After graduating in 1980 he undertook practical sea-training culminating in the award of his Bridge Watchkeeping Certificate in 1982. In 1987 he undertook the Principal Warfare Officer's course. He then served on exchange at sea in the Royal Navy for two years. This posting to the UK included a deployment to the Persian Gulf in the Iran/Iraq war. On return to Australia he served at sea in the 1990/91 Gulf War. As a result of this service he was awarded the Commendation for Distinguished Service. After this he spent two years as Fleet Direction Officer at Maritime Headquarters in Sydney, prior to being appointed as Executive Officer of the destroyer HMAS *Hobart* from 1993-1995. On promotion to Commander he was posted firstly as head of the Operational Design Group at the Navy Combat Data System Centre. Whilst in that position he

established the *Australian Defence Force* (ADF) Tactical Data Link Authority to coordinate tactical data link issues across the ADF. After that he was Deputy Director Surface Warfare Development at Australian Defence Headquarters for which he was conferred the Conspicuous Service Cross. Commander Menhinick assumed command of the new ANZAC frigate HMAS *Warramunga* on 24 January 2000. Following promotion to Captain he became Director of the Sea Power Centre – Australia in February 2002. He has been appointed as the Commanding Officer of HMAS *Anzac* with effect from December 2003. Captain Menhinick holds a Bachelor of Arts and a Master of Maritime Studies.

Vice Admiral Chris Ritchie, AO, RAN

Vice Admiral Chris Ritchie graduated from the RAN College in 1968 and received further training at sea and in the United Kingdom before undertaking a succession of seagoing appointments and a staff appointment at the NATO School of Maritime Operations at HMS *Dryad*.

His commands have included HMAS *Tarakan*, HMAS *Torrens*, and HMAS *Brisbane*. During his period in command of HMAS *Brisbane* the ship deployed to the Arabian Gulf, where she participated for the duration of the Gulf War. In 1991, as a result of this service, he was appointed a Member in the Military Division of the Order of Australia.

In 1992, Vice Admiral Ritchie attended the Royal College of Defence Studies in the United Kingdom. On completion he was promoted to Commodore and had appointments in Naval Policy and Warfare, and Military Strategy and Concepts. In 1997 he was promoted and appointed as Maritime Commander Australia, returning to Canberra in May 1999 to serve briefly as Deputy Chief of Navy before taking up the appointment of Head of Capability Systems. As a consequence of his service in these appointments he was promoted to Officer in the Military Division of the Order of Australia in January 2001.

Vice Admiral Ritchie was appointed as Commander Australian Theatre on 3 August 2001. He was the first Commander to have previously served as a Component Commander to the Headquarters. On 3 July 2002, he was promoted to Vice Admiral and appointed as Chief of Navy.

Dr David Stevens

Dr David Stevens was born in 1958 and joined the Royal Australian Naval College in 1974 as a Cadet Midshipman. He subsequently served in a variety of ships as a watchkeeping officer. In 1984 he was posted to the United Kingdom to complete the Principle Warfare Officer Course. Having specialised as an anti-submarine

warfare officer he served on exchange with the Royal Navy in HMS *Hermione*. During this time he participated in a Falklands Islands Peace Patrol, one of the first foreign officers to do so after the end of the Falklands War. He later served in HMAS *Hobart* and in several staff positions at Navy Office in Canberra. During 1990-91 he served on the staff of the Australian Task Group commander during Operation DAMASK and the 1991 Gulf War. Before leaving full time RAN service in 1994 he spent several years in the ADF Development Division dealing with anti-submarine warfare and communications projects. On transferring to the RANR in 1994 he became the inaugural Director of Naval Historical Studies within the Maritime Studies Program. In 1992 he graduated from the Australian National University with a Master of Arts (Strategic Studies) and in 2000 received his PhD from the University of New South Wales with a study entitled *The impact of the submarine threat on Australia's maritime defence 1915-54*. He has lectured widely and is the author or editor of several books on maritime strategy and naval history. Dr Stevens is currently the Director of Strategic and Historical Studies within the Sea Power Centre – Australia, and is a Commander in the RAN Active Reserve.

Mr Joe Straczek

Mr Jozef Straczek joined the RAN as a Junior Recruit in January 1971. Following training at HMAS *Leeuwin* he was selected to undertake technical training at HMAS *Nirimba*. He was subsequently selected as an Officer Candidate and, after WA Leaving and Matriculation and a course at the Royal Melbourne Institute of Technology, was commissioned as a Supply Midshipman in 1977. After specialist training at HMAS *Cerberus* he was posted to various supply positions at HMAS *Cairns*, HMAS *Cerberus*, HMAS *Lonsdale*, HMAS *Albatross*, HMAS *Waterhen* and Fleet Headquarters. Mr Straczek also undertook a period of loan service with the PNGDF as the Procurement Officer for the Defence Supply Agency, Port Moresby. In late 1990 he transferred to the naval reserve to take up a position in the Australian Public Service as the Senior Naval Historian. Mr Straczek has had a long-term interest in Naval History, writing his first articles in 1974. During his naval service has been involved in the running of a number of naval museums. As a naval reservist he has been deployed for historical duties to the Middle East Theatre of Operations on two occasions and aboard HMAS *Jervis Bay* during her last trip to East Timor. Mr Straczek is a graduate of the RAN Staff College and holds a Bachelor of Arts and Master of Defence Studies. He is currently working towards a PhD on the topic of the History of Signals Intelligence in the RAN. He is currently a Lieutenant Commander in the RAN Active Reserve.

Foreword

The Royal Australian Navy Maritime Studies Project commenced in April 1990, and evolved into the Maritime Studies Program in mid-1991. In January 2000 the Program became a directorate of the Navy Strategic Policy and Futures Branch in Navy Headquarters and was renamed the RAN Sea Power Centre. The title was amended to the Sea Power Centre – Australia (SPC-A) in late 2002.

By whatever name and in whatever guise, the enduring mission of what is now the SPC-A has been to promote an understanding of sea power and its application to the security of Australia's national interests, including fostering and contributing to public debate on these subjects. One of the paradoxes of modern Australia is that we celebrate a pervasive folklore about the influence of 'the outback' or 'the bush' on our identity, in defiance of another influence which, unlike 'the outback', has always been essential to our very survival – 'the sea.' Many Australians promote the image of a nation formed by, living in, and still focussed on a vast, largely untamed wilderness, whereas the majority of Australians live in large cities and towns on the coastal fringe. There is nothing intrinsically harmful about such folklore so long as it is recognised as such, and the SPC-A does not seek to take up any quixotic challenge to it. Rather, the SPC-A seeks to further our national knowledge and understanding of the facts of Australia's broader geographic and strategic situation as an island continent in an oceanic region, and the role of maritime forces in protecting the national interests that result from our geography.

The most prominent activities pursued in fulfilling this mission have undoubtedly been a diverse range of briefings, conferences, seminars, lectures and study periods on maritime issues, and an active publishing program that includes *Australian Maritime Doctrine* and a range of commercial publications. For the first decade, the Program concentrated on producing articles for a wide variety of publications, while publishing in its own name significant works developed from its major conferences and seminars, or recording the results of original research into regional maritime issues. These major research activities are now published in the series entitled *Papers in Australian Maritime Affairs*. In mid-1999, these substantial works were complemented by the introduction of the shorter but still detailed *Working Papers*, intended to foster debate and discussion on maritime issues of relevance to the RAN, the Australian Defence Force, and to Australia and the region more generally.

My predecessor, Captain Richard Menhinick, recognised that there was a range of historical and contemporary Australian maritime subjects that would benefit

from more concise and accessible coverage, and the *Semaphore* series of newsletters was introduced to meet this need in late 2002. The series was designed to raise matters of immediate interest in a format that would both encourage review and stimulate debate. The subject matter varied widely: from recognition and review of historical events to thought-provoking reflections on our national maritime identity and analyses of future operating environments and force structure requirements. These newsletters were not intended as comprehensive technical papers; rather, each one was developed within a limit of 1500-2000 words to present a complex topic in a concise and readable manner suitable for a wide audience. Despite their brevity, each *Semaphore* was extensively researched and analysed, and subjected to rigorous scrutiny to ensure it was interesting, informative and factual.

This *Paper in Australian Maritime Affairs* is a compilation of the *Semaphore* newsletters published by SPC-A between December 2002 and December 2003. Most of the early articles were written in-house by members of the SPC-A staff, but as the series developed an increasing number were condensed from longer academic works, or commissioned by the SPC-A to ensure expert coverage of a topical subject. Regardless of the gestation of each article, the amount of time taken by the author was apparent in the quality of the product and the overwhelmingly favourable public response to the series. Collectively, the newsletters reflect the type of vibrant and varied maritime debate that the Centre exists to promote, and which deserves to be collated into this permanent record.

The *Semaphore* newsletters have proven to be a most popular and successful addition to the SPC-A publishing program. This compilation recognises their long-term value as a thought-provoking information resource, and allows individual authors to be publicly identified and recognised for their efforts.

Captain Richard M. McMillan, RAN
Director
Sea Power Centre – Australia

September 2004

Editor's note

Semaphore 3 of 2003 and *Semaphore 15* of 2003 have been omitted from this document, as they were used to advertise the 2003 King-Hall Naval History Conference and the 2004 Navy Sea Power Conference respectively. *Semaphore 2* of 2002 has been included as it confronts some entrenched misconceptions about the true age of the naval forces in Australia, and has not been previously published in an Sea Power Centre – Australia compilation.

The information contained in the articles published in this volume was current at the time they were printed in 2002 and 2003. Some information, particularly that related to operations in progress at the time, will no longer be current.

Contents

Abbreviations and Acronyms

AAR	Air-to-Air Refuelling
ADF	Australian Defence Force
AEW&C	Airborne Early Warning and Control
ANMEF	Australian Naval and Military Expeditionary Force
ANZAC	Australia and New Zealand Army Corps
ASL	Archipelagic Sealanes Legislation
ASM	Anti Ship Missile
ASMD	Anti-Ship Missile Defence
AWD	Air Warfare Destroyer
CMF	Commonwealth Military Forces
CNF	Commonwealth Naval Forces
DCP	Defence Capability Plan
DDG	Guided Missile Destroyer
EEZ	Exclusive Economic Zone
FFG	Guided Missile Frigate
FPSO	Floating Petroleum Storage and Offloading
GBAD	Ground Based Air Defence
HDML	Harbour Defence Motor Launch
HMAS	His/Her Majesty's Australian Ship
HMAT	His Majesty's Australian Transport
HMS	His/Her Majesty's Ship
HSK	*Hilfeskreuzer*
IPMT	International Peace Monitoring Team
JI	*Jemaah Islamiah*
JPDA	Joint Petroleum Development Area
JSF	Joint Strike Fighter
MILF	Moro Islamic Liberation Front
MRA	Multi-Role Auxiliary
MV	Motor Vessel
NCW	Network Centric Warfare
NGS	Naval Gunfire Support
OTHR	Over the Horizon Radar
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RFA	Royal Fleet Auxiliary
RM	Royal Marines

RMA	Revolution in Military Affairs
RN	Royal Navy
SAM	Surface to Air Missile
SCC	Sea Control Combatant
SMS	*Seine Majestäts Schiff*
UN	United Nations
US	United States
USN	United States Navy
USS	United States Ship
ZOC	Zone of Cooperation

How Old Is Australia's Navy?

Dr David Stevens

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 defence force 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.'[1]

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'.[2] One would be hard pressed to find more appropriate words to mark more than 100 years of service by Australian sailors.

Notes

1 Report by Captain W.R. Creswell, Naval Commandant Queensland, on the best method of employing Australian seamen in the defence of commerce and ports, 7 February 1902. Commonwealth Parliamentary Papers, 1901, Vol. II, p.149. Cited in *In Search of a Maritime Strategy: The maritime element in Australian defence planning since 1901*, D. Stevens (ed), Canberra Papers on Strategy and Defence, No. 119, Strategic and Defence Studies Centre, Australian National University, Canberra, 1997, p.153.

2 Hughes, W.M., 'A policy for the times', *Navy, Army and Air-Force Journal*, 1 September 1933, p.3.

Published as Issue 2 December 2002

Sea Control and Surface Combatants

Captain Richard Menhinick, CSC, RAN

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, and 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.'[1] 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'.[2] Sea control today is very much a multi-dimensional 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 electro-magnetic spectrum. Each of these multi-dimensional 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.[3] 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 Gulf War. Despite some initial success, most denial strategies ultimately fail. In most cases these failures can be attributed to the one-dimensional 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 was multi-dimensional, involving both 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 and possess inherent capabilities for interdiction and boarding. In higher intensity operations surface combatants combine 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 in 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 execute 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 escalation, particularly in complex or 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.

Notes

1 Royal Australian Navy, *Australian Maritime Doctrine*: RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p.39.

2 Gray, C., *The Leverage of sea power: The strategic advantage of navies in war*, Free Press, New York, 1992, p.1. Cited in *Australian Maritime Doctrine*, p.43.

3 *Australian Maritime Doctrine*, p.39.

Published as Issue 1 March 2003

New Guinea WWII—A Maritime Campaign

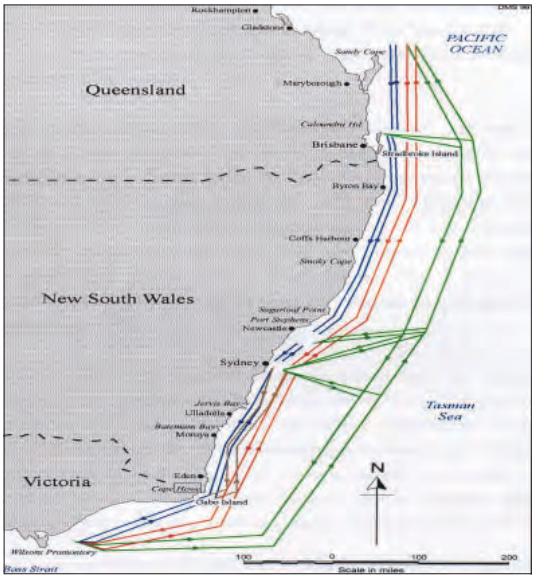
Mr Joe Straczek

To most Australians the campaign fought against the Japanese in New Guinea during WW2 is typified by images of Australian diggers and 'fuzzy-wuzzy angels' struggling along the Kokoda Track or fighting hand to hand at Milne Bay. Very few would consider this to have been a maritime campaign, yet this is exactly what it was, for the final arbiter of victory or defeat in the jungles of New Guinea was maritime power.

Following Japan's attack on the United States Pacific Fleet at Pearl Harbour on 7 December 1941, the sinking of Force Z (HMS *Prince of Wales* and HMS *Repulse*), and the subsequent defeat of Allied naval forces in the Battles of the Java Sea and Sunda Strait, the Imperial Japanese Navy had achieved control of the seas in the South Pacific. This enabled her to project her military forces into the islands north of Australia. By 23 January 1942 Rabaul had fallen and became the location of the Japanese forward headquarters. In order to protect Rabaul the Japanese occupied Lae and Salamaua on 8 March. However, the Japanese were soon to find that the capture of Lae did not ensure the security of Rabaul from air attacks, and they decided to capture Port Moresby by amphibious assault.

That the Japanese intended to conduct an amphibious assault on Port Moresby (*Operation MO*) had become known to the Commander-in-Chief Pacific Fleet through the work of USN and RAN code breakers. As a result of this intelligence Task Force 17, built around the aircraft carriers USS *Lexington* and USS *Yorktown*, was sent to the Coral Sea to engage the Japanese. Also assigned to Task Force 17 was a cruiser squadron under command of Rear Admiral J. Crace RN, which included HMAS *Australia* and HMAS *Hobart*. Prior to the battle Rear Admiral F.J. Fletcher, USN directed Admiral Crace to patrol the Jomard Passage at the eastern tip of New Guinea. The Port Moresby Invasion Force, which included the light carrier *Shoho*, was provided with distant cover by the aircraft carriers *Shokaku* and *Zuikaku*. As it approached the Jomard Passage the Invasion Force learnt of the presence of Admiral Crace's cruisers and halted awaiting the outcome of the impending carrier battle further to the south. Although in the ensuing Battle of the Coral Sea the Americans lost the *Lexington*, the Japanese carriers were in no condition to support the further advance of the Port Moresby Invasion Force, which by this time had lost the *Shoho*. Rather than fight their way through the cruiser blocking force the Japanese retired to Rabaul.

Failure to take Port Moresby by amphibious assault did not deter the Japanese. They immediately commenced planning to take Port Moresby by assault from the land. This would entail a landing at Buna, which was undertaken on 21 July, and an advance across the Owen Stanley Ranges. All the logistics required by the Japanese to support this assault, and the Allies to oppose it, had to be carried by ships. So began the struggle for control of the sea-lanes.



Australian coastal convoy routes in WWII

From May 1942 Japanese submarine operations off Australia's east coast began to take a toll on shipping. By August seven ships had been sunk and a further six damaged. Convoys were organised to protect this vital shipping and the First Naval Member was designated the Commander South West Pacific Sea Frontiers. Fortunately for the Allies the Japanese failed to allocate sufficient resources to the submarine campaign and this, coupled with a lack of strategic intelligence, ensured that losses were never of such a magnitude as to disrupt the flow of supplies north. By the end of 1943 over 60 warships were allocated for convoy escort duties. The figure above shows the convoy route along eastern Australia. By contrast, in the interdiction campaign against the Japanese sea lines of communications USN submarines effectively destroyed the Japanese merchant marine. An example of the fate of Japanese convoys is the January 1943 patrol by the USS *Wahoo*. During the course of a ten-hour running battle off New Guinea, she reported sinking an entire convoy of two Japanese freighters, one transport and one tanker.

The Japanese losses of merchant shipping ensured that only a trickle of logistics and reinforcements reached the Japanese in New Guinea. By contrast Allied forces were receiving more and more supplies and equipment. As an indication, from the opening of the campaign until September 1943 7261 vehicles, 306 guns,

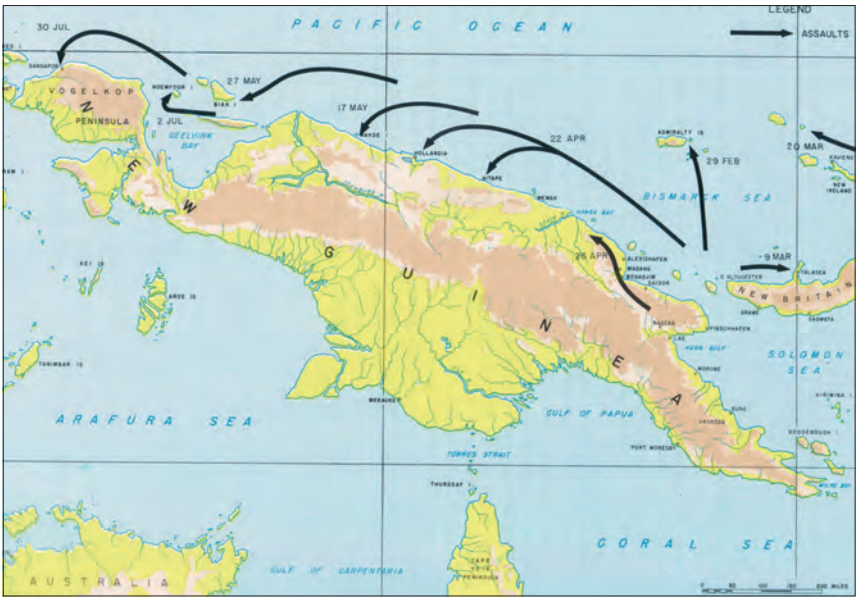
596033 tons of stores, and 75 surface craft were shipped to New Guinea. By mid-1943 the Japanese attack on shipping was coming to an end as their submarines and light forces were being increasingly used to supply cut-off island garrisons. During the course of the war in excess of 1,100 coastal convoys were escorted by units of the RAN, not including a number of special convoys or troop convoys.

Air power contributed to the maritime interdiction campaign, attacking Japanese shipping, airfields and port facilities. The first Japanese defeat at Milne Bay was assisted by the destruction of an enemy convoy on 25 August 1942 by 75 Squadron RAAF. In the most notable example, intelligence warned of the last major Japanese resupply operation, a reinforcement convoy from Rabaul to Lae. Termed the Battle of the Bismarck Sea, continuous coordinated attacks by RAAF and US aircraft on 3 March 1943 resulted in the sinking of all eight transports, four out of eight destroyers, and the loss of at least one third of the Japanese troops. This action was untypical because weeks of advance warning was provided, which allowed for intensive, coordinated training and rehearsal—most shipping interdiction actions were ad hoc at short notice. From mid 1943 RAAF Catalinas mined Japanese ports, sinking or damaging 40 per cent of all shipping entering the Balikpapan-Surabaya area.

As the Americans and Australians went over to the offensive in New Guinea the inherent advantages of sea power, in the context of flexibility and manoeuvre, became apparent. The Seventh Fleet Amphibious Force was established under command of Rear Admiral Daniel E. Barbey, USN. From October 1942 through to July 1944 this force conducted a series of amphibious assaults from Goodenough Is in the east through to Sansapor on the western tip of New Guinea as shown on p.12. These assaults, when combined with the central Pacific advance, were a demonstration of manoeuvre warfare on a grand scale. Strong enemy forces were bypassed, whilst captured areas became advanced bases, airfields and logistic depots for the continuing maritime offensive against the Japanese. After Kokoda there were no other northern advances across New Guinea. The movement of Allied forces was in a westerly direction in a series of amphibious assaults.

RAN ships, in particular the Infantry Landing Ships HMAS *Kanimbla*, HMAS *Westralia* and HMAS *Manoora*, cruisers, destroyers and the Bathurst Class corvettes played an important part in the naval campaign for New Guinea providing escorts, fire support, amphibious sea lift, minesweeping, survey and logistic support. The smaller craft of the RAN, Fairmiles, HDMLs and other motor launches, also played an important role in patrol work, convoy escorts, hydrographic surveys and clandestine operations. Supporting these ships were

a number of logistics and other specialist ships that ensured the Allied ground and air forces had the required equipment and support to conduct and sustain operations in a very hostile environment. Had the Allies been unable secure the sea lines of communications the final outcome in the jungles of New Guinea may have been very different. It was not the stalwart efforts of the Australian and US ground forces alone, but the combination with the maritime interdiction campaign against Japanese supply lines, amphibious movements to outflank and bypass defensive positions, and the successful convoying of 'troopers, beans and bullets in greater and greater numbers'[1] that forced the Imperial Japanese forces back from Port Moresby to their final defeat.



Amphibious assaults in the South-West Pacific

Published as Issue 2 April 2003

Notes

1 Monson, S.E., *Breaking the Bismarks Barrier 22 July 1942 – 1 May 1944*, History of the United States Naval Operations in World War II, Volume V, Oxford University Press, London, 1950, p.448.

Timor Sea Oil and Gas – Too Valuable To Ignore?

Mr Matthew Flint

The Timor Sea is an area rich in natural resources including fish, sea cucumber, oil and gas. For this reason there has been much political and legal debate over the allocation of exploitation rights to the area with Australia, Indonesia and East Timor all claiming rights to a proportion of the resources. Of all the resources in the Timor Sea, oil and gas will provide the region with the greatest long-term benefits. This has resulted in protracted negotiations to determine maritime boundaries between these three countries, which have been resolved through a series of bilateral treaties.

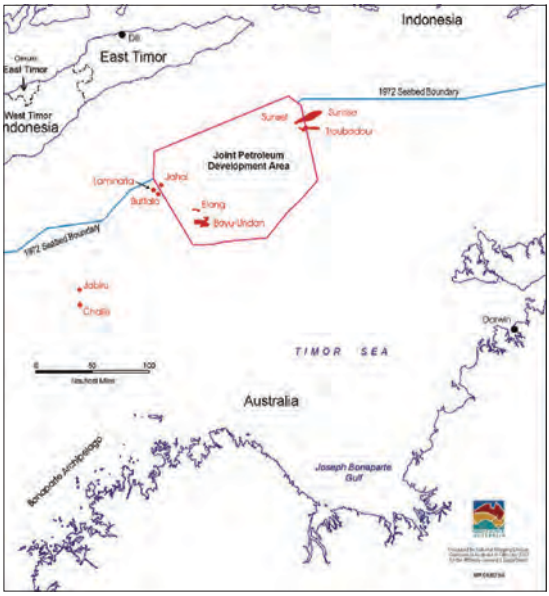
The Timor Sea Treaty between Australia and East Timor is the most recent and a particularly good example of the nature of the negotiation process. East Timor's independence from Indonesia saw the annulment of the previous Timor Gap Treaty between Australia and Indonesia, which established a three part Zone of Cooperation (ZOC) opposite the East Timorese coastline. The annulment of the Timor Gap Treaty reopened the debate on the delimitation of the boundary as Australia and East Timor both claimed rights to the ZOC. Each country's claims could be argued under international law and the matter was resolved by establishing the Joint Petroleum Development Area (JPDA) under the Timor Sea Treaty (see Figure 1). The Treaty allocates 90 per cent of the revenue from the area to East Timor and 10 per cent to Australia.

The resources in the JPDA amount to almost 12 trillion cubic feet of gas and 900 million barrels of oil. At the moment, oil is currently being processed and exported from the JPDA. The majority of the gas resources, which are still in the development phase, are located in the Bayu-Undan and Greater Sunrise deposits. These gas deposits will have a significant impact on the region's petroleum industry. Australia stands to gain $4 million a year from Greater Sunrise and $2 billion in total revenue from Bayu Undan. Depending on how the area is developed, downstream financial benefits to Australia could be as much as $22 billion, including the provision of up to 20,000 jobs in the Northern Territory. The resource sharing arrangements under the Timor Sea Treaty will underpin East Timor's economic development for the foreseeable future and are therefore vital to that country's survival.

The Treaty establishes detailed arrangements for the administration, exploitation, management and protection of the JPDA. Included in these arrangements is the requirement for surveillance and patrols of the area to be

conducted in order to protect the resources. East Timor does not currently possess an air force, and has no plans of developing one in the near future. Similarly, East Timor's navy comprises two Albatross Class Patrol Boats, donated by the Portuguese government. Australia's youngest neighbour, therefore, has no real capability for contributing to patrols. Therefore it will fall to Australia to conduct patrols of the JPDA in order to protect these vital resources.

Australia undertook patrols of the ZOC, under the now defunct Timor Gap Treaty. These patrols ceased when East Timor gained independence from Indonesia and the treaty was annulled. Since then, Australia has continued to conduct patrols in and over Australia waters, up to but not including the JPDA. The ratification of the Timor Sea Treaty has reopened the door for surveillance and patrols of the JPDA. These patrols are yet to occur. Foreign fishing vessels and suspected illegal entry vessels receive the highest priority. The region's current strategic situation is constantly changing and has seen an increase in the emphasis placed on the potential for terrorist activity. This may require JPDA resources and facilities to be protected.



Timor Sea JPDA

The economic importance of the JPDA to both Australia and East Timor should not be underestimated. Not only will the resources primarily underpin East Timor's development, they also have the potential to turn Darwin into the region's major petroleum producing centre. However, the JPDA resources and facilities are as vulnerable as they are valuable. The installations used to extract oil and gas in the JPDA include Floating Petroleum Storage and Offloading (FPSO) facilities, tankers converted for the task. FPSO facilities are located adjacent to oil and gas fields and are moored to the sea bed using a system of lines and anchors. Their large size and fixed position makes them

inherently vulnerable to attack from small, agile craft. Tanker and support vessel traffic will also increase in the JPDA as development and production continues. This traffic is similarly vulnerable to attack during close manoeuvres and also while docked.

Maritime terrorism has become an issue of international importance in recent years since the attacks off Yemen on the *USS Cole* in 2000 and the *MV Limburg* in 2002. The suicide attack on the *USS Cole*, which occurred while the ship was refuelling, killed 17, injured 39, and caused significant damage to the ship. The explosive packed speedboat that rammed *the MV Limburg* penetrated both its double hulls, killing one of the crew and causing 90,000 barrels of oil to spill into the ocean.

Maritime terrorism is not restricted to the waters in the Middle East. Abu Sayyaf and the Moro Islamic Liberation Front (MILF) are two separatist terrorist groups active in the Philippines since 1991. Abu Sayyaf has a strong history of abducting foreign nationals for profit and publicity. MILF has perpetrated attacks against shipping, primarily domestic ferries. In addition, Al-Qa'eda, which has been linked to terrorist organisations in Southeast Asia such as Jemaah Islamiah (JI) and Abu Sayyaf, has made specific threats against the global petroleum industry. Despite the lack of immediate threat to JPDA facilities, the pre-existence of maritime terrorism in the region, and links between Al-Qa'eda and regional terrorist organisations, creates the potential for unexpected attacks. This should be taken into consideration when tasking maritime surveillance operations, particularly given planned developments in the JPDA.

Southeast Asia, and Indonesia in particular, continues to be a haven for pirates. Of the 374 reported cases of piracy across the world last year, 103 were in Indonesian waters. The majority of these occurred when the target vessel was either at anchor or in port. While the bulk of these attacks are cases of theft, a number were hijackings. In most cases pirates used small vessels to carry out their attacks, typically gaining access via ropes or anchor cables. The attack on the *MV Limburg* has shown that maritime terrorists need only behave like pirates to achieve a successful attack against shipping in Southeast Asian waters.

Large numbers of small fishing vessels frequent the JPDA. These vessels often sail quite close to FPSO facilities, and have been known to approach the rigs seeking assistance and supplies. FPSO crews would have a great deal of difficulty differentiating between an innocent fishing vessel and a pirate vessel, and therefore may not have the opportunity to request assistance or otherwise prevent the attack. Furthermore, FPSO crews have neither the capacity, nor the authority, to carry weapons to defend themselves against such attacks.

The JPDA's remote location means that the time required for a response would reduce its effectiveness. The JPDA is therefore a soft target and very vulnerable to terrorist attack.

Early detection remains the best method for preventing terrorist attacks. Surveillance capabilities, such as the Jindalee Operational Radar Network, enable Australia to monitor its sea and air approaches, allowing incoming craft to be detected, but not identified, well before they reach Australia. Surveillance data of this type allows surface response craft to be deployed to identify suspect craft, and if necessary, intercept them as they enter Australian territorial waters. This type of technology enables Australia to protect and defend the JPDA.

Navigation safety zones are established around every petroleum installation in Australian waters, including the JPDA. These zones prohibit unauthorised vessels from entering within 500 metres of an installation. They provide Australia with the ability to prevent potentially dangerous craft from approaching valuable oil and gas installations and causing damage through either attack or accidental collision. These zones therefore constitute a very useful legislative tool for protecting the JPDA.

The emergence of global terrorism, and its impact in the region, has caused Australia to review its strategic policy in the region. In the light of developments in the JPDA, Australia should continue to regularly examine its strategic outlook and patrol priorities in order to ensure that this valuable area remains protected in the future.

Published as Issue 4 June 2003

The Decline of Australian Naval Deterrence 1919–1939

Lieutenant Commander Glenn Kerr, RAN

The Commonwealth Naval Forces inherited a motley collection of obsolescent coastal and harbour defence vessels when the State navies transferred to Commonwealth control on 1 March 1901. As a result, the defence of Australia's sea lanes remained the responsibility of the Australian Squadron of the Royal Navy. On 24 November 1909 Prime Minister Joseph Cook received majority approval from the House of Representatives (by 39 votes to 9) for the scheme of Imperial naval defence espoused by Admiral 'Jackie' Fisher, First Sea Lord of the British Admiralty, and immediate construction of an Australian fleet unit. The unit was to comprise an *Indefatigable* class battlecruiser, three *Bristol* class unarmoured cruisers, six *River* class destroyers, and three 'C' class submarines. The cost to Australia was to be £3.695m—an astonishing figure for the newly federated nation of four million. Most importantly, unlike the Australian Squadron, the Australian fleet unit was to remain under the absolute control of the Commonwealth Government in peace and war, unless specifically placed under the control of the British Admiralty.

Australia's drive to provide for its own naval defence, and contribute to Imperial naval defence, culminated on 4 October 1913 when the fleet unit, led by the battlecruiser HMAS *Australia*, proudly sailed into Sydney Harbour to the wild acclaim of the public. In just four years Australia had created a potent naval deterrent against any potential enemy raiding force. When the British Empire declared war on Germany and Austria-Hungary on 5 August 1914 the RAN mustered a battlecruiser, two new cruisers (with a third building), two older cruisers, three destroyers (with three building), two 'E' class submarines, and some old colonial warships.

This force far outmatched that of its local rival, the German East Asiatic Squadron commanded by Vice Admiral Graf von Spee. In 1914 *Australia* was the most powerful warship in the entire southern hemisphere. Von Spee was well aware of the threat, stating in a letter to his wife that the battlecruiser 'by itself, is an adversary so much stronger than our squadron that one would be bound to avoid it'. Von Spee did indeed avoid the Australian coast prior to the outbreak of war and, when faced with the potential threat of Japanese forces joining the conflict on the British side, sailed east into the Pacific. After the outbreak

of war, between searching for von Spee, the RAN assisted in capturing the German colonies and wireless stations in the South Pacific, protecting ANZAC convoys, and sinking the cruiser SMS *Emden*. Von Spee did not return to the western Pacific, and on 8 December 1914 all but one of his ships were sunk off the Falkland Islands. All significant threats in the Pacific having been destroyed, for the remainder of the war the major elements of the RAN patrolled the North Sea and Mediterranean alongside the Royal Navy.

By late 1919 the RAN's strength had peaked at a battlecruiser, three cruisers (with one building), an older cruiser, six 'J' class submarines, twelve destroyers, four sloops, a gunboat, plus auxiliaries. However, despite the clear deterrent value that the RAN had provided against an enemy raiding threat, the ensuing fate of the RAN for the next two decades was far from happy. The jubilation that followed the arrival of the fleet unit in 1913 and the sinking of the *Emden* by HMAS *Sydney* in 1914 had been overshadowed by four years of bloody warfare. The feeling that the creation of a powerful navy had heralded the nation's coming of age had been displaced by the growing ANZAC mythology, whereby the nation's independence had been bought with blood on the shores of Gallipoli. While the Navy had grown to a strength of over 5,000 personnel and 37 ships during WWI, this paled against the experience of the 421,809 men enlisted in the AIF and its 215,585 casualties (including 61,720 dead). The national psyche and sense of nationhood had firmly shifted from a naval to an army focus. This would have serious repercussions for the RAN from 1919 to 1939 in terms of trying to maintain a credible force, as the will to invest in an effective and independent navy declined.

HMAS Australia and the RAN Fleet Unit, Sydney Harbour, 4 October 1913

Both victors and vanquished were crushed by the experience of 1914–18, and in its aftermath anti-war feelings ran high around the world. The League of Nations was created to prevent future conflict, by providing an international

forum where countries could resolve their differences without recourse to war. Popular feeling in Australia and other Western nations was decidedly opposed to armaments and militarism, lest another ruinous war result. This feeling was compounded by the rise of socialist movements, notably unions, in the wake of the 1917 Russian Revolution, that saw standing military forces as potential tools to be used by the ruling elites to control the proletariat. As such, there was strong public and political pressure on successive Australian Governments to reduce military spending and divert that funding toward social benefit schemes.

Added to these problems, the Armed Forces in general, and the RAN in particular, faced increasing financial stringencies. The war had been ruinously expensive for the British Commonwealth. After expending £377m, the Australian Government ended the war with loans of £262.5m, or 68 per cent of GDP, including a debt to the United Kingdom of £43.4m. Nor was this the full extent of the financial burden, for ongoing repatriation and pension expenses imposed a heavy and continuing drain on the post-war budget. By 1934 the total cost of the war had grown to £831.3m. The Great Depression would strike further blows at the RAN, resulting in the defence budget being slashed by 21 per cent in 1930/31 and another 17 per cent in 1931/32. At its lowest point in 1932 the RAN could muster only three ships in full commission, the heavy cruisers HMAS *Australia* and HMAS *Canberra* and the seaplane tender HMAS *Albatross*. The old destroyer HMAS *Tattoo* was in partial commission, and two light cruisers of 1908 design, HMAS *Brisbane* and HMAS *Adelaide,* were in reserve. Personnel numbers were cut to under 3,000 and wages slashed by up to 25 per cent to further save money.

The RAN also faced attack from the Army and RAAF, as each fought to retain its share of the depleted defence budget. The RAAF in particular pushed to replace the Navy as the first line of national defence, arguing that air power alone, through a combination of greater speed and mobility, could protect Australia's local sea lines of communication and prevent invasion. This argument, which ignored the broader functions of the RAN including distant trade protection, power projection in the littoral, and providing a national presence, has been enduringly attractive to financially constrained Australian governments. While the air power argument was not fully accepted, successive governments seriously considered the idea of dispensing with the RAN and either distributing the task of naval defence to the Army and RAAF or returning it to the Royal Navy. Naval funding allocations suffered accordingly.

Doctrinally, the Royal Navy's focus on trade protection had shifted from Fisher's integrated units of battlecruisers and cruisers back to cruisers alone. The

battlecruiser, originally intended to counter enemy cruisers in the same way as destroyers had been intended to counter torpedo boats, had been discredited by its failure at the Battle of Jutland to stand up to undamaged enemy battleships—a task for which it was not designed. Fisher, who had retired in 1915, was discredited, and the cruiser lobby, which had controlled the Admiralty prior to Fisher's elevation to power, returned the Royal Navy to its original course. To fulfil the trade protection mission along the vast sea-lanes of the Empire it was thought that many small cruisers were better than a few large battlecruisers. A battle fleet was still required for protection of home waters and the Mediterranean, plus the occasional foray into the Pacific, but battleships and carriers, not battlecruisers, would form its backbone. The doctrinal shift shaped the RAN, emphasising the need for cruisers to contribute to the protection of Imperial shipping, rather than a balanced fleet unit for national defence.

Following WWI Britain, America and Japan all instituted ambitious naval construction programs to introduce new designs reflecting wartime experience. America wished to achieve parity with the numerically superior Royal Navy, and restrict the Imperial Japanese Navy, without incurring the cost of a naval arms race. In 1921 President Harding called a conference between the USA, Britain, Japan, France and Italy to advocate mutual naval arms limitation. Faced with massive post-war debts all parties agreed on limitations. The ensuing 1922 *Washington Five Power Naval Treaty* made restrictive demands on the signatories. No new capital ships were to be built for 10 years and no capital ship was to be replaced until it was 20 years old. A capital ship ratio was set at 5:5:3:1.7:1.7, which assigned parity to Britain and America, placed Japan in third place, and left France and Italy bringing up the rear. Additional constraints were placed on tonnage and armament. There was also to be no expansion of existing bases, fortifications, or repair facilities in the Pacific—except Singapore. The immediate result of the treaty was that Britain, America and Japan scrapped a number of unfinished capital ships and older dreadnoughts. One of the ships included in the British tally, with the full concurrence of the Australian government, was the battlecruiser *Australia*. Henceforth Australian naval deterrence would be restricted to cruisers for local and Imperial trade protection.

As the depression eased, and faced by a worsening international situation the Australian Government looked again to the neglected RAN. In 1935 Japan had withdrawn from the Washington Treaty, Germany had repudiated the Treaty of Versailles, and both began building powerful navies. To provide a more useful trade protection force, the Government placed successive orders for three light cruisers, two destroyers and four sloops. Nonetheless, expenditure on the RAN

continued to decline as a proportion of overall defence spending, reaching just 26 per cent in 1939. When war was declared on 3 September 1939 the RAN had just two heavy cruisers, three modern light cruisers, a light cruiser of 1912 design, five WWI vintage destroyers (with two new *Tribal* class building) and two sloops (with two building).

Australian naval deterrence between the wars was a victim of an unfortunate series of circumstances, which saw the RAN reduced from a formidable fleet unit in 1919 to a limited trade protection force in 1939. This decline would have serious repercussions for Australia and the RAN when Japan thrust southward in 1942.

Published as Issue 5 July 2003

Iraq Lessons: The More Things Change

Dr David Stevens

Echoing earlier wars, the successful conclusion of combat operations in Iraq has brought with it the expected flood of analysis from defence commentators. Within Australia there have already been calls to cancel or reduce the scale of some planned capabilities while accelerating the adoption of others more 'appropriate' to a seamless transitioned force. Although the term 'revolution in military affairs', or RMA, appears to have fallen from prominence, the Second Gulf War has evidently witnessed such a revolution, one which has delivered such 'a devastating shock to traditional notions of Australia's military' that it is now 'set to sweep aside years of military culture'.[1] Even the notion that Australia's security interests are determined by geography has now been 'firmly' repudiated.[2]

The media may rapidly pick up on such themes, but they tend to lack both understanding and depth of analysis. The classic example from 1991 was the emphatic, 'Gulf Lesson One is the value of air power', attributed to the US President, but thereafter adopted by those seeking to address Australian security concerns with a silver bullet. The 2003 version may well be 'Network-Centric Warfare is the warfare of the future' because, we are informed, 'the game is different in the networked environment'.[3] The e-battlespace is obviously vital, and there is a strong case for the better linking of remote sensors and platforms,

5" gun mount firing from HMAS Anzac

but some commentators seem either too ready to confuse the means with the desired end or are unaware of the need for a more considered approach to the spectrum of ADF operations.

The ADF is not simply a cut-down version of the US military, and concepts of transition applicable to a global power should not be adopted in isolation, nor used to obscure the unique nature of our circumstances. For example, the RAN's limited number of warships are often required to undertake a far wider and more nuanced mission than their USN counterparts. The influence of geography on Australian security can likewise never be ignored, simply because Australia endures as a physically large and widely dispersed maritime nation, one for which any possible military movement, either as threat or contribution, must travel on, over or under the sea. Information, vital though it is to the allocation of assets, cannot directly substitute for physical presence. What use a future ADF that has misjudged the balance between systems and equipment to the extent that it cannot afford sufficient platforms?

Similarly dangerous is the belief that technical solutions may somehow replace a robust operational doctrine founded on many years of experience. Although the Navy is a technology-based organisation, our appreciation of these technologies is firmly rooted in the historical perspective. Our tools must never be allowed to drive the way we need to fight. As Dr Andrew Gordon has argued in one of the Sea Power Centre's most recent publications,[4] the purveyors of a new technology almost always oversell the revolutionary nature of their deliveries, offering untested certainties while holding back on vulnerabilities. No matter how good the preparations, the practice of warfare will never be perfectly rational, and hence there is no substitute for the inherent flexibility of a well-trained, disciplined force which has managed to get its culture, doctrine and practices lined up with its operational tasks. In fact, while the character of conflicts may change, the deeper one looks the more certain it is that the enduring principles of war have changed hardly at all.

This would all come as no surprise to any student of naval history and strategy. More than a century ago, Rear Admiral Alfred Thayer Mahan, USN, attempted to define the principles of sea power in an age of technological transition. He recognised the influence that control of the sea exerted on campaigns and understood that the principal impact of technology was on tactics and that, while strategic and doctrinal ideals may be modified by scientific developments, they will not be fundamentally altered.[5] In consequence, success in the 'warfare of the future' is likely to be just as firmly based on a willingness to accept risks, a preparedness to use one's initiative, and the ability to recognise when a decisive moment has arrived. This requires a warfighting and cultural ethos that goes far beyond systems management.

To better illustrate these enduring features, one might point to the use of naval gunfire support (NGS) on 21-22 March 2003, during the Royal Marine (RM) assault on the Al Faw Peninsula. The USN had employed battleship NGS with considerable effect in 1991, but by 2003 the battleships had long gone and the USN had built up a measure of institutional resistance to the task, preferring instead to rely on air delivered weapons. Reinforcing this perception, the USN's cruisers and destroyers, although still mounting a 5-inch gun, were physically and operationally unsuited to the navigational constraints of Iraqi coastal waters. The RAN and Royal Navy, by contrast, gave an NGS capability far more prominence and possessed ships in the Gulf ideally suited to the mission. Indeed, HMAS *Anzac* was arguably the most effective ship available, both in terms of mounting the most powerful gun and in carrying the most ammunition. Equally important, the RAN's long-term presence in the area meant that its understanding of the littoral environment was unsurpassed. In consequence, the USN Commander was persuaded to preserve the NGS option, a decision vindicated by the manner in which events unfolded.

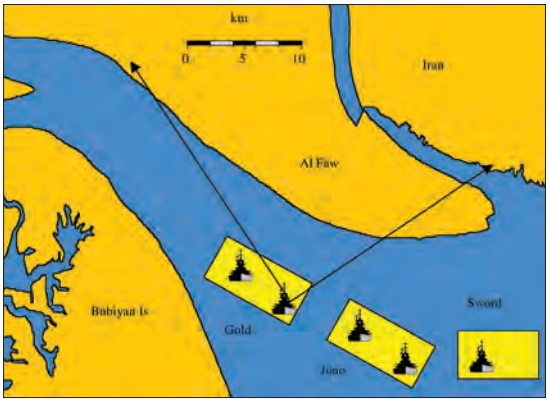


Chart showing NGS positions at Al Faw peninsula

Not only did poor weather and competing tasks restrict the use of tactical air support during the RM assault, but Iraqi beach mining also hampered the landing of artillery and light armour. As such, the four warships poised offshore undertook a more vital than expected role, providing highly accurate and responsive indirect fire for 48 hours rather than the originally planned 24. Of particular note was the aggressive yet restrained way in which this support was used. With 'dumb' rounds relatively inexpensive—in comparison to precision guided munitions—and a sensor to shooter response time measured in seconds rather than minutes, it was possible to provide a finely tuned psychological as well as a physical effect. Targets could be rapidly shifted as the tactical situation evolved and at times this meant that, even in well-protected positions, enemy troops could be encouraged to surrender or moved in a particular direction. The ships were later advised by 3 Commando Brigade that their gunfire had had a 'huge impact on the ground and shattered the enemy will to fight'.

NGS is hardly a new technique, but it is difficult to imagine a better means of offering such a swift, persistent, economic and most importantly, measured means of response. The lesson, however, is not that one capability is more effective than another, but that a commander must possess a range of capabilities that can be adapted to provide the desired effect in the circumstances that exist at the time. Having established sea control, Australia's deployed maritime assets were able to operate successfully in a multi-threat environment, and were simultaneously employed on multiple tasks ranging from air and surface defence to surveillance and boarding operations. Our men and women consistently demonstrated their professionalism and initiative, while our ships exhibited the inherent characteristics of mobility, access, readiness, persistence and flexibility that continue to make maritime power the great enabling instrument. As Defence responds to demands for a radical cultural and equipment shift,[6] we would do well to remember the need for balance, for some things do not change and, no matter how well networked, it is only the well-practised combination of people, hardware, and doctrine which can apply the effect.

Notes

1 M. Forbes 'The lessons of Iraq are set to transform Australia's military structure', *Age*, 3 May 2003.

2 A. Dupont, 'Straightjacket off as defence gets real', *Australian*, 27 February 2003.

3 See Forbes above.

4 *The Face of Naval Battle*, Allen & Unwin, 2003

5 A.T. Mahan, *The Influence of Sea Power Upon History 1660-1783*, Boston: Little Brown and Company 1890.

6 M. Walsh and F. Benchley, 'The Defence Matrix', *Bulletin*, 3 June 2003.

Published as Issue 6 August 2003

Before Gallipoli: Australian Operations in 1914

Lieutenant Commander Glenn Kerr, RAN

On 4 August 1914 the British Empire declared war on Imperial Germany and Austria-Hungary, and Australia immediately began to contribute to the Empire's war effort. The First World War was to have an indelible shaping influence on Australian society and culture. Regrettably, the undeniably heroic actions of the Australian and New Zealand Army Corps (ANZAC) in the opposed landing at Anzac Cove on 25 April 1915, the subsequent bitterly fought Gallipoli campaign, and the national mythology that grew from it, have overshadowed the earlier successful actions of Australian forces in the war. This is a great pity, as late 1914 witnessed some notable Australian firsts—the first land operation of the war, the first amphibious landing, the first joint operation, the first coalition operations, the first offshore military expedition planned and coordinated by Australia, the first bravery decoration of the war, the first combat casualties of the war, the first RAN warship lost, and the first enemy warship destroyed.

On 7 August 1914 the British War Office requested that Australia seize the German colonies in Nauru, the Caroline Islands and New Guinea. The primary reason for this request was to prevent enemy wireless stations from passing information to the German East Asiatic Squadron of the Imperial German Navy, commanded by Vice Admiral Graf von Spee, that might hinder British efforts to bring it to battle. The Royal Australian Navy (RAN) acted swiftly to eliminate the enemy threat to the Empire's shipping. On 11 August the destroyers HMAS *Parramatta*, HMAS *Yarra* and HMAS *Warrego*, covered by the light cruiser HMAS *Sydney*, prepared to launch a torpedo attack on the German anchorages in Simpsonhaven and Matupi Harbour, New Britain, but found the enemy squadron gone. Landing parties were placed ashore at Rabaul and Herbertshöhe to destroy the wireless station, but when it was learned that the station lay inland it was clear that an expeditionary force would be required. Meanwhile, the battlecruiser HMAS *Australia* was scouring the Pacific for von Spee's squadron. Von Spee was aware of the threat, recording in his diary on 18 August that 'the *Australia* is my special apprehension—she alone is superior to my whole squadron.'

On 29 August 1914, in Australia's first coalition operation, a New Zealand Expeditionary Force of 1400 troops landed at Apia, Western Samoa, covered by the guns of *Australia*, and the cruisers HMAS *Melbourne,* HMS *Psyche,* HMS

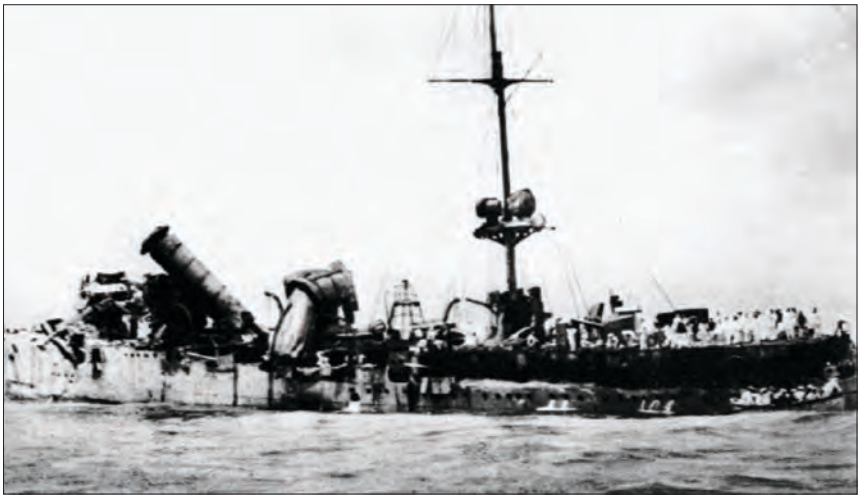
Pyramus, HMS *Philomel* and the French *Montcalm*. With no troops to defend the islands, the German Administrator surrendered on 30 August. The wireless station and harbour facilities were thereafter denied to von Spee's squadron.

The Australian Naval and Military Expeditionary Force (ANMEF) began recruiting on 11 August, consisting of a battalion of 1,000 infantry and a small battalion of 500 naval reservists and time-expired RN seaman. The force left Sydney on 19 August aboard the transport HMAT *Berrima*, a liner requisitioned from P&O, after a period of training near Townsville. The force sailed for Port Moresby to await the arrival of supporting RAN vessels. On 7 September the force, now including *Australia*, the cruisers *Sydney* and HMAS *Encounter*, the destroyers *Parramatta*, *Warrego* and *Yarra*, and the submarines HMAS *AE1* and HMAS *AE2*, sailed for Rabaul. Meanwhile, on 9 September *Melbourne* landed a party on Nauru to destroy the wireless station, whereupon the German administrator promptly surrendered.

On 11 September a force consisting primarily of naval reserve personnel was put ashore at Kabakaul to seize the wireless station located inland at Bitapaka. The landing force experienced strong initial resistance, and was forced to make small group attacks through the thick jungle to outflank the enemy. The wireless station was captured and destroyed. This attack resulted in Australia's first combat casualties of the war—four sailors of the landing force and an attached Army doctor—Able Seaman Walker (he served as Courtney but was re-buried under his real name by the Commonwealth War Graves Commission), Able Seaman Williams, Able Seaman Street, Able Seaman Moffatt, and Captain Pockley (Australian Army Medical Corps). The other fatal casualty suffered during the operation was Lieutenant Commander Elwell, Royal Navy. On 12 September a combined Navy and Army force was put ashore at nearby Herbertshöhe, while another landing force seized Rabaul. On 14 September *Encounter* shelled German positions at Toma, the first time an RAN vessel had fired on an enemy and the RAN's first shore bombardment. The German resistance, comprising 40 reservists and 110 native troops, was no match for the ANMEF, covered by the 12" guns of *Australia*, and the acting Governor surrendered all of German New Guinea on 17 September 1914. Subsequent operations occupied Bouganville and the New Guinea mainland colonies unopposed. The Governor's steam yacht *Komet*, captured on 9 October 1914, was subsequently commissioned into RAN service as HMAS *Una*. The campaign was an overwhelming success, rapidly achieving all objectives set by the War Office. A RAN reserve officer, Lieutenant Bond, was awarded the Distinguished Service Order, the first Australian bravery award of the war. In a tragic footnote, *AE1* disappeared without trace with all 35 personnel on board, the first unit of the RAN to be lost on operations. On 26 September *Sydney* completed Australian operations against the German Pacific colonies by destroying the German wireless station at Angaur in the Palau Islands.

While these operations were in progress other RAN vessels were contributing to the war effort by capturing German merchant shipping. HMAS *Pioneer* captured the steamers *Neumunster* and *Thuringen* off Western Australia; HMAS *Protector* the steamer *Madang* off New Britain; and the launch *Nusa* the steamer *Siar* and the schooners *Matupi* and *Senta* off Kavieng.

On 1 November 1914 the first ANZAC convoy sailed for Egypt from Albany, WA. The escort comprised the cruisers *Melbourne*, *Sydney*, HMS *Minotaur* and the Japanese *Ibuki*. On the same day as the Australian Government received notification that the Empire was at war, von Spee had detached the light cruiser SMS *Emden* from the East Asiatic Squadron for independent operations in the Indian Ocean. By early November *Emden*, under Captain von Müller, had sunk or captured 22 ships, thoroughly disrupting shipping operations, forcing up insurance premiums, and drawing warships away from other theatres. On 9 November 1914 *Emden* landed a shore party at Direction Island (in the Cocos Island group) to destroy the cable station. The operators managed to get off a warning signal before the station was closed down. The message was picked up by the convoy and *Sydney*, commanded by Captain Glossop, was detached to intercept. Better armed, faster and more manoeuvrable, *Sydney* caught the German cruiser by surprise, forcing von Müller to abandon his landing party. Despite a fierce resistance the outcome was a foregone conclusion—the Australian ship pounded *Emden* into a burning hulk, and von Müller drove his ship up onto North Keeling Island to save his remaining crew. *Sydney* suffered four killed and eight wounded, *Emden* 115 killed and 80 wounded. *Sydney*



Wreck of SMS Emden at North Keeling Island—10 November 1914

then intercepted *Emden's* collier *Buresk*, which scuttled herself as the cruiser approached. The 50 strong landing party from the *Emden*, led by Lieutenant Commander von Muecke, seized the station's schooner *Ayesha* and escaped, eventually reaching Germany after various adventures.

The destruction of the *Emden* freed the shipping routes of the Indian Ocean from raiding warships. However, the German East Asiatic Squadron remained at large, a continuing threat to shipping in the Pacific Ocean. On 1 November 1914 Rear Admiral Cradock, commander of the North American station, encountered von Spee's squadron off Coronel. In a battle fought in deteriorating weather conditions the old armoured cruisers HMS *Monmouth* and HMS *Good Hope* were sunk with all hands by the armoured cruisers SMS *Scharnhorst* and SMS *Gneisenau*, and light cruisers SMS *Dresden*, SMS *Leipzig* and SMS *Nürnberg*. The blow to British naval prestige could not be ignored, and the Admiralty redoubled its efforts to hunt down von Spee. The battlecruisers, HMS *Invincible* and HMS *Inflexible*, under the command of Vice Admiral Sturdee, were detached from the Grand Fleet to lead the hunt. *Australia* was ordered to the American Coast, rendezvousing on 29 November with the Japanese cruisers *Asama*, *Idzumo* and *Hizen*. On 8 December von Spee decided to raid the British coaling station at Port Stanley in the Falkland Islands, in preparation for his return to Germany. Unfortunately for him, Sturdee's force was already anchored in Port Stanley. When von Spee's ships were sighted Sturdee raised steam as quickly as possible and set out in pursuit. *Scharnhorst*, *Gneisenau, Leipzig, Nürnberg* and the colliers *Baden* and *Santa Isabel* were sunk by *Invincible* and *Inflexible*, the armoured cruisers HMS *Carnarvon,* HMS *Kent* and HMS *Cornwall;* the light cruisers HMS *Glasgow* and HMS *Bristol;* and the auxiliary merchant cruiser HMS *Macedonia*. *Dresden* and the supply ship *Seydlitz* were the only German vessels to escape the battle. *Seydlitz* was interned in Argentina and *Dresden* scuttled herself when run to ground at the Chilean island of Mas a Fuera on 14 March 1915. With the major German threat in the Pacific and Indian Oceans now eliminated, Australia's newer warships could be reallocated to the Atlantic and Mediterranean theatres of operations, while lightly escorted ANZAC troop convoys could sail unmolested to Europe and the Middle East.

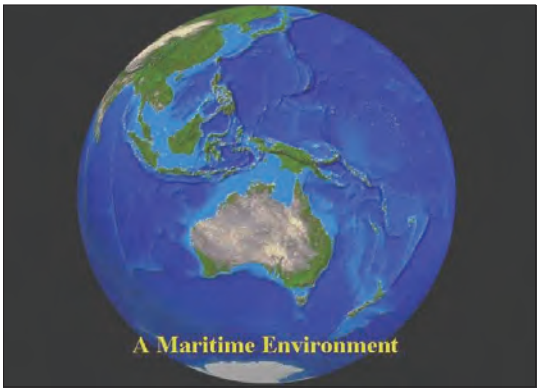
In the last five months of 1914 Australian forces, particularly the RAN, participated in a series of successful actions which, at the cost of ten dead, assisted in sweeping the Indian and Pacific Oceans clear of enemy warships and seizing all German colonies in the South Pacific. In comparison to these actions, the land campaigns of World War One would provide Australia with a harsh introduction to modern warfare—one that would scar and shape the nation.

Published as Issue 7 August 2003

Australia's Maritime Dependence

Captain Richard Menhinick, CSC, RAN

An understanding of Australian strategic realities should begin with the 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 policy.



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 per cent 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 per cent for Australia itself, and is even higher for most of South-East Asia. Oceans provide access to nearly all parts of the globe, with 85 per cent of states having a coastline.

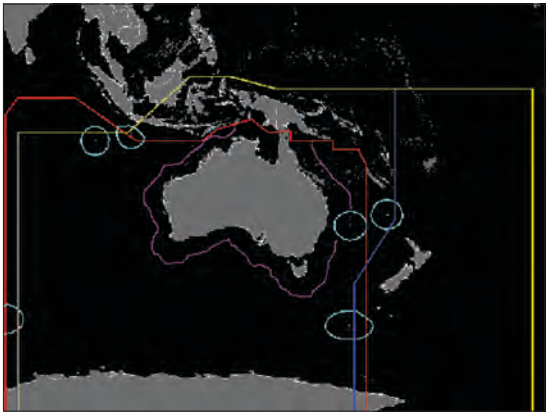
Professor Geoffrey Till notes that the increase in the world's population and living standards will increase the need for global movement of bulk cargoes. He also notes that the World Bank's current forecast is that by 2012 world seaborne trade will have doubled in terms of ton-miles and this trend will continue.[1] 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 self-sufficient. Of our international trade, 99 per cent by bulk and 73.5 per cent by value is carried by ship,[2] with about 95 per cent 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.[3] 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 per cent 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 per cent. Marine industries have excellent potential to contribute to future economic and employment growth. In 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,[4] maritime forces may operate with few if any constraints. Activities are conducted in a non-discriminatory fashion, having due regard to the coastal states' rights with respect to fiscal, sanitary, immigration and economic issues.[5] 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.



Australia's area of maritime responsibility

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.[6]

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.'[7] 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.

Notes

1 Till, G. 'Maritime Trade; Introduction,' Till, G. (ed), *Seapower at the Millenium,* Sutton Publishing Limited, UK, 2001, p.177.

2 Bureau of Transport & Regional Economics (BTRE), *Australian Transport Statistics – 2002*.

3 Department of Foreign Affairs & Trade (DFAT) *Fact Sheet: Why Trade Matters, 22 Dec 02*.

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

5 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.

6 Indonesian Regulation 37 of 2002, which 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 Dec 02.

[Editor's Note. Indonesia has subsequently advised the International Maritime Organisation that this is only a partial designation of archipelagic sea lanes in the Indonesian archipelago.]

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

Published as Issue 8 September 2003

Why the ADF Needs Major Surface Combatants

Captain Richard Menhinick, CSC, RAN
Commodore Alan Du Toit, RAN
Lieutenant Commander Glenn Kerr, RAN

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 a nation's 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, 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 World War II 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 Air Force assets. 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 from 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 responses 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 boarding and seizure of ships involved in illegal trafficking of contraband, and regional

Hypothetical future surface combatant

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 multi-national 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 land-attack (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 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. Furthermore, an air warfare capable 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 Destroyers, 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 Destroyer 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 geostrategic 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.

Published as Issue 9 September 2003

Sailing Into The Future

Vice Admiral Chris Ritchie, AO, RAN

Chief of Navy—Vice Admiral Chris Ritchie, AO, RAN

The international security climate has changed dramatically since the end of the Cold War, and particularly over the last two years, forcing a major re-think of our security situation. We are facing a world much less certain and stable than before, and the Asia Pacific region is not immune from these changes. The Government now clearly expects the ADF to be far more pro-active in dealing with potential threats, moving from a focus on the direct Defence of Australia to a more expeditionary outlook. With this renewed emphasis on meeting trouble before it gets to our shores, a strong Navy remains critical to our national defence. Maritime Power has been an indispensable feature of almost every Australian military operation since 1901. Much of this has been transparent to the outsider, but maritime power has been, and remains, absolutely essential to virtually all Australian military operations.

For Australia the strategic influence of the sea is all encompassing. The sea permits direct or indirect attack on Australia's national interests from every direction. Australia's reliance on the sea for trade and economic well being is absolute. With globalisation resulting in greater interdependence of national economies, great harm could be done to the economy and the people of Australia by even low-level warfare or asymmetric threats against Australian trade or interests at a distance from our coastline. Control of the sea is not only axiomatic to the protection of trade but for the projection of power from the sea. In a maritime environment power can only be projected from the sea if a nation can assert power over the area of the sea that is required to support the operation. The growing importance of the sea in the Asia Pacific region is reflected in the rise of regional naval power, which indicates that the value of maritime power is being recognised by many countries as a critical factor in their development.

Given the maritime and littoral nature of Australia's strategic environment, *sea control* is vital, and the ability to gain and maintain sea control must be the basis upon which the Navy is structured. Sea control is that condition that exists when one has freedom of action to use an area of the sea for one's own purposes for a period of time and, if required, deny its use to an opponent. It is a relative rather than absolute concept. That is, you only need the degree of control required to achieve your mission, and only for the time taken to achieve your mission. Sea control is multi-dimensional, applying not only to the sea surface, but also to the water column and seabed, the air and space over the sea, and the adjoining land areas that influence the sea. Air and land forces are thus integral to the concept of sea control. Control of the air and the adjoining land areas, particularly in choke points and other key littoral zones, is critical.

Unfortunately, much of the benefit of maritime forces is not always apparent, and so does not feature in the public's perception of national security. Operations such as blockades may continue quietly for many months before becoming effective, and critical efforts to maintain uninterrupted sea lines of communication to support land campaigns are usually forgotten when looking at the land campaign itself. Australians rarely realise that without sea control we could not have sent the ANZACs to Gallipoli, defended New Guinea in World War II, or operated in East Timor.

There are essentially three broad categories of tasks that maritime forces can undertake—diplomatic, constabulary and military. The RAN has seen a major increase in the tempo and range of operations in all three categories over the last ten years. Clearly the constabulary roles are an increasing focus for the Navy, with ongoing border protection activities, drug interdiction and fisheries patrols all being high profile and demanding requirements. A high level of diplomatic activity has been sustained, with visits, exercises and peace support activities. As with the Army and RAAF, and as has been recognised by the Government, naval forces structured and trained for military warfighting roles can undertake the less demanding diplomatic and constabulary ones, but the reverse is not true. Hence the RAN must be structured for warfighting, as the defence of Australia and its interests, is and must remain, the ADF's primary concern. Consequently, we need to maintain high-end warfighting capabilities within a *balanced fleet* of surface ships and submarines and the ability to coordinate with airborne assets and land forces to ensure control of the airspace and sea-land interface. We must structure to suit our own national needs, but some specific high-end naval capabilities, that are both critical for Australia's security and fully interoperable with coalition partners, are essential.

There are some key characteristics of seaborne forces that must be capitalised on to maximise our national security. The first is *mobility in mass*. Even a moderate sized ship can carry a far greater payload than an aircraft. Although slower than aircraft, ships are much faster than land forces, a key factor in littoral manoeuvre operations. Thus ships will remain the primary method of transferring the bulk of equipment and personnel, augmented by air movement for time-critical activities. Secondly, ships have both *reach and presence*. By carrying most of their logistic requirements with them, and deploying with dedicated replenishment and support vessels, a task group can operate for extended periods at long distances from shore support. The carrying capacity of ships also mean they can provide significant logistic support to land forces, minimising the footprint ashore. Additionally, ships do not need host nation support to operate away from Australian territory. Thirdly, *readiness* is also a key attribute. Ships can be ready to deploy in a contingency at very short notice. Fourthly, their *flexibility* means they can undertake a variety of roles, often simultaneously, during the same deployment. They can shift from the most benign of activities to offensive action with virtually no warning. Finally, modern warships possess *resilience*, being designed to withstand significant damage or defects when coupled with well-trained crews. These attributes are critical in the Multi Dimensional Manoeuvre Concept that the ADF has recently endorsed for the future.

So where is the Navy heading in the future? *Force 2020* and the *Future Warfighting Concept*, detailing how we expect to fight by 2020, envisage the ADF operating as a truly *seamless* force, with tailored capability packages networked together to complement each other. The key enabling concept emerging is that of Network Centric Warfare (NCW), which aims to link the sensors, weapons and command and control systems of a force together into a seamless package. For the Navy the NCW future will largely be an evolution of the way we already conduct business, utilising the same principles, but with greater bandwidth, automation and function transferability.

The RAN clearly needs to be able to operate autonomously at significant distances from Australia and to support the Government's requirements to transport, protect and support land forces on extended operations in our immediate region and broader area of interest. While this most obviously requires amphibious sealift and afloat support ships, it is critical that the RAN retains a balanced fleet to provide for the sea control that is essential to achieve success in *any* offshore operations. The vision for 2020 is for a fleet of surface ships, aviation assets and submarines that have the ability to facilitate control of the maritime battlespace, in close cooperation with the RAAF and Army. At

the heart of this force will be an air warfare capable destroyer or more correctly termed, a Sea Control Combatant (SCC), working with the Joint Strike Fighter, Airborne Early Warning & Control aircraft, Air to Air Refuelling aircraft, and Army Ground Based Air Defence assets, to maintain control of the air and provide air defence for an ADF task group deploying from Australian shores. Aircraft are obviously key components of this vision, but our geography places clear limitations on land based aircraft operations. Although forward bases in other countries will always be our preferred option, we cannot assume they will always be available or defendable, and a capable SCC will provide a high level of air control even in the absence of continuous aircraft support.

The SCC, whilst having a strong air warfare bias, will not, however, only be used for air defence. It will be our primary surface combatants and will deliver a range of capability options to the ADF. Capable of operating at the highest end of the conflict spectrum, it will contribute to activities for the direct defence of Australia, operating in the region, or globally as part of allied coalitions. The utility of these vessels means that they will be critical used across the full spectrum of maritime operations from diplomacy through to full-scale combat operations. They will also be the mainstay of our sea-based strike and air warfare capabilities, as well as having significant surface, undersea and electronic warfare abilities. They will be true multi-role platforms, fully interoperable with our major allies, key ADF assets to assert sea control, and absolutely essential to any ADF led operation offshore. The SCC will be supplemented by other surface combatants. The ANZAC Class frigates and any follow on surface combatants will need to be capable of working in the littoral environment as well as independently in the open ocean. RAN surface combatants must increasingly be able to deliver firepower further inshore in support of land operations, particularly during the vulnerable initial stages of a landing.

As the ADF becomes more expeditionary in its outlook, the Navy will have the key role of transporting, protecting, landing and supporting land forces in the littoral. Work is already well advanced to introduce up to three large replacement amphibious ships, which will obviously need excellent range, good speed and self-protection capabilities. Importantly, these ships, in conjunction with replenishment ships, will have a significant role in supporting as much of the landing force infrastructure as possible, in order to minimise the footprint ashore. All these developments would significantly reduce the burden of both getting assets ashore and then supplying and protecting them. This 'sea basing' concept entails having as much of your force as possible at sea, only landing what you need to do the job ashore, when and where you need it, and is something the ADF should closely investigate.

Submarines will become increasingly networked and integrated into our task groups, and hence increasingly useful in the joint environment as well as their current individual roles. Unmanned Underwater Vehicles and Unmanned Aerial Vehicles have a potential that needs to be exploited in the future to significantly reduce the risk to our people. They will be deployed from both surface ships and submarines in a variety of surveillance and warfare roles. The mine warfare capabilities again proved their worth during the Iraq War, and will remain a potent force into the future. A replacement capability is required in the 2020 timeframe. Finally, patrol boats are the mainstay of our constabulary force, and the requirements for the surveillance and response capabilities that these ships provide will inevitably increase over the coming decade.

The maritime strategy that we need for Australia's security relies on a strong, capable and balanced Navy, and in the increasingly uncertain times ahead we must have the ability to gain and maintain sea control. We must retain some cutting edge capabilities to be able to operate independently with an acceptable chance of success, as well as to contribute in a real and practical way to coalition operations. In short, land forces, embarked forces, naval assets, aircraft and command elements must be networked so everyone has the same picture, and the best placed assets, regardless of service, are tasked to deal with situations. A truly seamless force, able to work with the Army, RAAF and our allies to provide a total force package, is fundamental to meeting the strategic tasking of the Government.

Published as Issue 10 October 2003

Editor's Note: This is a summary of a speech to the United Service Institute on 6 August 2003 by the Chief of Navy, Vice Admiral C.A. Ritchie, AO, RAN.

The New Maritime Security Environment

Commodore Jack McCaffrie, AM, CSM, RANR

The recent upsurge in world terrorism and the potential for so-called 'rogue states' to acquire weapons of mass destruction and long-range missiles has led to some rapid reassessments of national security demands in many countries, including Australia. The most recent Australian strategic assessment, The *Defence Update 2003* highlighted these newly prominent threats and the implications for the ADF. It also acknowledged the troubled nature of Australia's immediate region and its greater exposure to a variety of security threats. A likely outcome of the reassessment is a greater focus on ADF operations in the immediate neighbourhood, in response to terrorism or the many other existing and potential security problems.

Terrorist attacks in the last three years, have generated some broader appreciations of the nature of national security. Southeast Asia has seen a resurgence of terrorist activity recently, some directly affecting Australia's interests. Most recent regional terrorist acts have involved relatively unsophisticated explosive devices, but the potential for attacks with more sophisticated weapons has been foreshadowed in the recent foiled attempt to smuggle shoulder-launched surface-to-air missiles into the USA and the failed attempt in Kenya to shoot down an airliner in November 2002. There is also evidence of the desire by terrorist groups to acquire weapons of mass destruction, whether chemical, biological, radiological or nuclear.

The Australian Defence Force (ADF) has a long record of involvement in countering terrorism within Australia, ranging from intelligence support to physical security of venues and hostage recovery. The extent to which the ADF could become further involved in counter-terrorism operations within Australia will depend on the nature of emerging threats, although the recent creation of a second Tactical Assault Group and an Incident Response Regiment flag an ongoing, enhanced role. The more sophisticated the threat, the more likely ADF capabilities will play a part in countering them. This could bring into play some major elements of the Force, including RAAF maritime patrol aircraft and RAN warships where shipping or maritime resources are involved.

Further afield, the potential for the ADF to be involved in countering terrorism will depend significantly on the willingness of regional countries to permit Australian involvement and on the development of regional approaches to the matter. Nevertheless, terrorism—like any threat—is better dealt with at a

distance from the homeland if at all possible. The extent to which the sea dominates the region suggests that the Navy could play a significant role in counter-terrorism operations, either in its own right or jointly.

Defence 2000 determined that the ADF must comprise forces able to protect our maritime approaches and to support maritime and land forces deployed into the region. *Defence Update 2003* introduced two extra threats, terrorism and the proliferation and potential for use of weapons of mass destruction, noting the potential for increased calls for the ADF to operate in the immediate neighbourhood. It also accepted that our strategic circumstances had changed and that there would be consequent implications for future types of conflict, operations and the capabilities we would need. Nonetheless, the terrorist attacks since September 2001 have not 'changed everything'. There is still a range of security tasks and challenges likely to require the application of the operational capabilities now in the ADF and planned for it in the future. In recent years, for example, the Navy has been heavily involved in a very wide range of operations, ranging from outwardly simple policing tasks to major military campaigns.

The Navy has been involved in interception operations in the Persian Gulf for several years, has provided substantial support to land operations in East Timor, has prevented the arrival of illegal immigrants, has conducted sovereignty patrols in the Southern Ocean, and now has an ongoing support role in the Solomon Islands peacekeeping mission. But, even as the nation has been preparing to deal with terrorism locally, the Navy, as part of ADF contingents, has participated in two major 'conventional' military campaigns in the last two years within major maritime coalitions.

Another significant issue is the recent reminder that events demanding a military response can emerge with little or no warning—and can result in rapid policy shifts on the part of government. While the *Defence Update 2003,* produced in March 2003, noted that the Australian Government should not be expected to solve the problems of the Solomon Islands, by July the ADF had been committed to support the Solomon Islands government restore order. There can be no telling what future challenges will emerge for the Navy. One clear outcome of recent events is a realisation by Australian defence policy makers that a strategy emphasising protection of the maritime approaches and ultimately defence of the landmass is no longer sufficient. Changed strategic circumstances are demanding much greater emphasis on operations within the region by the ADF, with perhaps a greater emphasis on land force operations in future. More frequent operations in the region would involve a high priority for maritime forces. Any operations to be conducted offshore by the Army will

be Joint. The naval contribution will include transport to the area of operations, command and control facilities, logistics support, and force protection in the area of operations. It could also permit sea-basing and the associated flexibility of force deployment and extraction.

The Navy will also need to be capable of future coalition operations with regional partners as well as with the USN. Experience and changing circumstances suggest that operations could occur anywhere from the Persian Gulf to the Korean Peninsula. Developments in the region, the breadth of tasking which is likely to confront the Navy as a result of the changed strategic circumstances and the national response to them will call on the full range of naval capabilities.

The nature of the region is such that ports will not always be available and operations will often require amphibious sealift—ships capable of loading and offloading over beaches or from offshore, using landing craft and helicopters. The amphibious sealift ships will also need extensive command and control suites for the management of joint and coalition operations. Resupply and sustainment operations will for the most part be accomplished by Navy afloat support ships. They will need to be capable of carrying and distributing a wide variety of stores, including ammunition. Afloat support vessels will be needed to support both amphibious forces and other naval forces.

Australian forces deployed offshore will need protection. The nature and extent of any threat will vary significantly with the circumstances and geographical setting. In some cases, where there is no evident or overt threat, protective forces could act simply as a deterrent. RAAF tactical and maritime patrol aircraft will contribute to such protective efforts, although the latter will often find it difficult to maintain a permanent presence in an area of operations, because of their limited range and the uncertain availability of forward operating bases. Permanent force protection can be provided by the Navy's surface combatants, which offer sustained and flexible force protection options for ADF forces operating in the coastal fringes of the entire region.

Surface combatant sustainability comes in part from a level of logistic self-sufficiency but mostly from the capacity to replenish from afloat support ships. This results in an ability to remain on station for months at a time. Their flexibility comes from their inherent responsiveness and adaptability and the considerable combat power they can wield. Surface combatants can move from the most benign of postures to the most offensive in very little time—and if necessary, with little or no outward sign of having done so. Similarly, the range of sensors and weapons carried by these ships allows them

to 'up the ante' gradually if circumstances so dictate. In a force protection role, surface combatants can deal with a range of threats simultaneously including: submarines, surface craft, aircraft, anti-ship missiles, and a range of land-based threats. Recent ADF operations in the region have indicated the need to counter quite sophisticated levels of threat. Importantly, however, there are limits to the capacity of the RAN's existing surface combatants to manage some threats, especially sophisticated threats from the air. While they could provide self-defence and defence of other units in the immediate vicinity, their ability to provide comprehensive area defence of a deployed force would be very much diminished by the lack of long-range sensors and weapons. It is primarily these inadequacies that the new air warfare capable destroyer is intended to correct.

Submarines can also contribute to force protection, through intelligence gathering and operations against adversary submarines and surface vessels within an area of operations. Beyond that, the submarine force can also be used offensively in support of offshore operations with their covert ability to insert special forces units.

Finally, there may be circumstances, such as those in the recent Iraqi conflict, in which mine warfare forces will play a significant protective role. The region in which we operate is susceptible to minelaying and our response to such operations could include RAN mine warfare forces.

Terrorism, as manifested recently in Southeast Asia, has generated a new and immediate threat to Australian interests. Thus far it has been limited to relatively unsophisticated attacks but more sophisticated means will likely be used in future. The nature and extent of the threat means that it has to be taken seriously and that the ADF must be an integral part of the national response to it. Furthermore, the ADF will need to adapt as the nature of the terrorism threat changes.

One such adaptation could include ADF operations offshore and within the region. These operations could involve elements of all three Services, including Navy surface combatants, submarines, amphibious sealift and minewarfare forces. Offshore operations could also be required for other reasons, as terrorism is by no means the only threat, and Australia's immediate region still presents a range of problems of a more traditional kind.

The main implication of these developments for the RAN is likely to be a greater emphasis on operations in support of land forces. Virtually any offshore land operation will involve the Navy both in transport and in force protection roles. Depending on circumstances, and the areas of operation, many if not all

of the Navy's combat and support capabilities could be brought into play. In some instances, the Navy might well be the major provider of force protection. In such circumstances, the Navy could also expect to be confronted by a range of threats including traditional yet sophisticated ones.

The combination of emerging and existing threats to Australia and its interests in the region will continue to present the nation with significant security challenges. The intention to include offshore deployment of land forces in the response to them will place a new emphasis on maritime forces and in particular those of the Navy. All such deployments will demand much support from the Navy and will demonstrate again the already proven value of maintaining a Navy with a broad balance of capabilities.

Published as Issue 11 November 2003

Australian Operations in the Solomon Islands

Mr Aiden Collie
Dr David Stevens

Operation ANODE is the Australian Defence Force's current effort to assist the Government of the Solomon Islands in reversing the lawlessness that has plagued the country in recent years. However, it is certainly not the first such operation. Indeed, for more than 120 years Australian or Australian-based forces have been active in the region, assisting at first the British colonial administration and then independent local authorities with both good order and national development. The common thread throughout this prolonged period of involvement has been the deployment of sea power in either a constabulary or diplomatic role, and thereafter the use of the flexibility inherent in naval vessels to provide an immediately responsive and sensitive reaction to government direction.

As early as 1880, the Commodore of the Australia Station despatched HMS *Emerald* to Florida Island after the massacre and mutilation of five British seamen engaged in a survey operation. The case was of deep concern for the Navy because it represented not just an outrage, but also an affront to the institution itself, and 'if the murderers are not severely chastised, [the Navy's] power for good, and as a deterrent to crime amongst the islands, will receive a great shock'.[1] Soon afterwards, as the British colonial efforts to secure free labour from Melanesian communities became more widespread, a cultural group called the Kwaio, from the eastern mountains of Malaita, resisted. Naval vessels maintained a constant, if tedious and dangerous, patrol, investigating incidents as they took place and taking punitive measures where necessary. Although most naval officers disapproved of the labour trade, they worked within a culture that had always placed great value on good order and discipline in human affairs, and ever hoped that their own sacrifice would in some way 'improve the condition of the native races—or to help us establish better relations between them and the white traders and others who visit their islands'.[2] Despite these hopes, violent clashes remained common and continued into the next century.

By the 1920s the British colonial administration in the Solomons had introduced a 'head tax' on the Malaitan communities. The only way for locals to earn this money was to work on the European-owned plantations and, understandably, the tax was not very popular. On 3 October 1927 a District Officer, accompanied

by a Cadet Patrol Officer and over a dozen local police, arrived at Sinalagu to collect the tax. A prominent Kwaio warrior named Bassiana lined up dutifully to pay his tax, but instead drew a concealed weapon and bashed the District Officer to death. Others in the crowd then drew spears and clubs and attacked the remaining police officers, killing ten. Upon hearing news of the massacre, and fearing an all-out island wide 'native uprising', the Resident Commissioner cabled the Colonial Office in London and demanded that they send a warship to crush the insurgency. By now, however, the Royal Navy was no longer responsible for the Solomons area. Instead, the Colonial Office contacted Australian authorities and requested that they respond.

The only ship available was the light cruiser HMAS *Adelaide,* which had just arrived back in Sydney from a 'showing the flag' cruise in the New Guinea area. She sailed on 10 October, the day after her captain was advised of the need to depart, and arrived off Malaita on 16 October, just 13 days after the massacre. Agreement had already been reached that *Adelaide* would provide logistic and communications support in addition to a significant show of strength, while her crew would supplement the local police force in mounting an expeditionary force. The 150 naval personnel put ashore were disciplined professionals, who performed creditably and provided a wide range of services from construction to catering, but the same could not be said of the remainder of the combined force. In a desire to wrap up the work quickly, the local police, some of who were traditional enemies of the Kwaio, arrested or shot some 20 innocent people before capturing the actual culprits.[3] By mid-November it had been decided that *Adelaide* was no longer needed and she returned to Sydney.[4]

Light cruiser HMAS Adelaide (I)

Twenty years later, Malaita remained a focus for local challenge against colonial rule. The Japanese occupation during World War II had shattered the myth of European racial superiority, as did the later arrival of Afro-American soldiers in relative positions of authority. Such factors combined to blur the horizontal distinctions between ethnicity and class, which had for decades been rigidly enforced by

the British. As a result, a (limited) pan-Malaitan political movement known as the Maasina Rule developed, posing a challenge to the colonial administration. The movement formed its own island-wide political structure, complete with its own sub-district councils. Even though the non-violent political negotiations posed no immediate threat, the destroyer HMAS *Warramunga* was dispatched to Guadalcanal in 1947 to exercise a 'steadying influence'. The British authorities ordered the arrest of prominent Maasina Rule leaders on charges of sedition, and once again the mere presence of a warship was used to deter civil unrest.

RAN warships kept up a semi-regular program of visits to the Solomon Islands over the next three decades. These visits were symbolic rather than coercive, and primarily served to demonstrate Australia's continued interest in and support for the region's development. In a diplomatic sense they culminated in the destroyer HMAS *Vendetta*'s presence in the capital city of Honiara for Independence Day celebrations in July 1978. Thereafter, the RAN became more closely involved in nation building activities, including the provision of patrol craft for surveillance work, assistance with surveying, and an annual deployment by a heavy landing craft and clearance divers to undertake wharf construction and reef channel clearance projects. In 1986 the RAN sent four warships to transport food supplies and reconstruction equipment after Cyclone Namu ravaged the islands. The larger ships were used as self-contained workshops in the Honiara area, while the landing craft resupplied remote localities utilising their beach landing capability. Commenting on the breadth of the RAN's activities and the skills delivered by his sailors, the Chief of Naval Staff, described the naval involvement as an 'aid scheme'; one moreover, that fostered 'personal goodwill which could never be achieved through any amount of diplomacy or aid dollars.'[5]

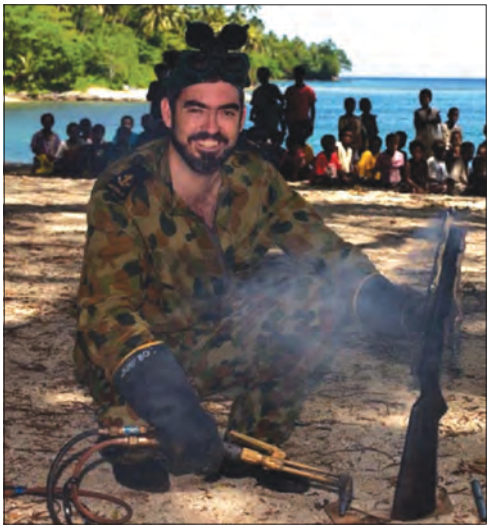
Despite these achievements there were practical and political limits to Australian influence. Exactly fifty years after the demise of the Maasina Rule, and two decades after independence, ethnic conflict erupted on Guadalcanal. The indigenous inhabitants (or Isatabu people) increasingly saw Malaitan migrants to the island as the new political and economic colonists. Malaitans controlled much of the government and business of Honiara and even the police force was 70 per cent Malaitan. Some Guadalcanal indigenes formed a militant group, the Guadalcanal Revolutionary Army (later called the Isatabu Freedom Movement) and began raiding police armouries, harassing Malaitan businesses, and threatening and attacking Malaitan homes. Malaitans retaliated in kind, forming their own para-military force—the Malaita Eagle Force (MEF). Since the police force was already compromised, and in many cases collaborated with the MEF, the central government had no practical means to halt

Guadalcanal's spiral into lawlessness. In 2000 a coup ousted the then Prime Minister and installed a new government, which proved to be even less capable of restoring state authority. In June the heavy lift ship HMAS *Tobruk* was dispatched from Sydney at short notice to evacuate Australian and foreign nationals from Honiara, eventually transferring 486 people to Cairns.

The evacuation of civilians did not mean the abandonment of the people of the Solomon Islands and over the next two years a succession of Australian major and minor fleet units were deployed to the area to provide a stabilising presence, monitor cease-fire agreements and further promote the peace process. RAN warships provided not only logistic, transportation and medical support to the International Peace Monitoring Team (IPMT), but also a neutral safe haven where the warring parties could meet and negotiate. Yet again, there were limitations on what could be achieved without direct intervention, and in June 2002 the IPMT withdrew from the Solomons leaving an indigenous Peace Monitoring Council to continue the process.

Law and order, however, remained problematic, with clan rivalries persisting and ex-militants pursuing agendas based on self-interest and consolidation of their local power and influence. Finally, in July 2003 at the request of the Solomon Islands leadership, Australia decided to embark on a regional assistance mission along with contributions from Fiji, New Zealand and Tonga. Although chiefly a criminal issue, and hence led by the Australian Federal Police, the operation to help the Government of the Solomon Islands restore good governance and re-invigorate its economy still required a significant ADF presence. Again it has been the role of RAN warships to act as enablers, transporting personnel and materiel and providing essential support to forces ashore. But more than this, warships have acted as a highly visible presence, an unmistakable demonstration of the power that backs Australian participation in the ongoing crisis.

Australian warships and personnel have a long history of involvement in the Solomon Islands and the remainder of the South-West Pacific region. The inherent capacity of a warship to easily change its posture and apply graduated, disciplined force is obviously the foundation on which this association rests. Yet, depending on circumstances, reassurance can be as important as compulsion and, rather than a tradition of assertive gunboat diplomacy, the flexibility of maritime forces has more often allowed the RAN to work towards the maintenance of a positive security environment through a program of constructive regional engagement. In this endeavour, the professionalism, competence and adaptability of a ship's company has made them extremely



Sailor from HMAS Manoora destroys surrendered weapon

effective and welcome ambassadors, particularly when humanitarian intervention or civil aid is required. 'The RAN', as Professor Peter Edwards noted at a recent SPC-A conference, 'has had a more significant role in the South Pacific than has often been understood or portrayed'.[6]

Operation ANODE simply provides the latest example of this role, and in the uncertain world of the future it is one that seems likely to continue.

Notes

1 See Bach, J., *The Australia Station* , NSW University Press, 1986.

2 Ibid.

3 Some sources place casualties at 70 or more. See Alasia, S., *State, Society and Governance in Melanesia: Party Politics and Government in Solomon Islands*. Australian National University Discussion Paper 97/7, 1997.

4 See Swinden, G., 'HMAS Adelaide and Malaita', D. Stevens (ed.), *Maritime Power in the 20th Century*, Allen & Unwin, 1997.

5 See D. Stevens (ed.), *The Royal Australian Navy*, Oxford University Press, 2001.

6 Edwards, P., 'The RAN in Australian Diplomacy', Third King-Hall Naval History Conference, July 2003.

Published as Issue 12 November 2003

Australia's Absent Maritime National Identity

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The Australian national identity is immature when compared to most other nations. We are still a very young nation and struggle in all kinds of ways, not only to understand our collective identity, but also what it is that we want that identity to be. This is exemplified in the changing concepts, ideas and values that Australian's have accepted as defining features of their culture over the years. These include the colonisation of Australia and the 'man versus nature' ethos, the notion of Australia as the 'child of Mother Britain', the bush myth, and the ANZAC legend, to mention only a few. A national identity is an important intertwining of past, present and future and comprises a myriad of images, feelings, collective and individual actions and responses, values, institutions, misconceptions and interactions with other nations. The confusion and ambivalence that is present in Australian society today can possibly be attributed not only to our youth and relatively short history, but also to our incomplete understanding of the significance of our origins.

The First Fleet 1788

To adopt a truly meaningful and mature national identity for Australia, we must learn more from our unique heritage. Heritage is more than simply the preservation of the past (our 'official' history); it is 'profoundly symbolic: how and what we value in the past says something about how we see ourselves as a community today and how we project ourselves into the future'.[1] That is, we are able to choose which aspects and lessons of our past we want to bring with

us into the future. It is particularly important to note that while the notion of heritage is much more than a simple historical account, history provides a strong basis upon which our heritage is built. The collection of historical information itself, and the way it is conveyed (ie. the degree to which we suffer from 'historical amnesia'),[2] can unintentionally blur and distort the meaning and symbolisms of a nation's heritage, and thus its culture and definable identity.

Given that 'we', as in those who came in 1788 to colonise Australia, came by ship, and the greatest influence of our early beginnings came from the Royal Navy, one may be forgiven for assuming that Australia's national identity is largely supported by a significant attachment to, and affinity with, the sea. Moreover, all immigration came by sea until the late 1960s, and the focus of illegal immigration since the early 1970s has been on the arrival of 'boat people' from Vietnam and the Middle East. Since Federation almost seven million people have arrived in Australia, the majority by sea. The sea is a great deal more than a coastline and a beach for recreation, but a necessary part of life that supports trade, provides a variety of important resources and, for Australia, defines a unique strategic environment.

Take, for example, the mythology surrounding British penal colonisation, which has largely displaced a primary maritime strategic driver for the colony's creation. While the closing down of America as a penal destination as a result of the Revolutionary War (1776-1783) required a new focus for transportation, there were closer areas in the Empire to which convicts could be sent at far less cost. However, by the early 1780s Britain was also at war with France, Spain and Holland, all of which had a growing presence in the South Seas. 'Australia sat astride three great ocean basins—the Indian, Pacific and Southern—Australia was too large a land mass to ignore and would inevitably become of some strategic importance.'[3] A port in Australia would provide a strategic location to replenish and refit Royal Navy ships operating against Britain's enemies in the south. Botany Bay presented a site protected by distance, and therefore relatively easily defended by a small naval and military presence. Convicts would provide a source of cheap labour to build the colony. Ancillary benefits of the new settlement would be the reduction of the overcrowded jails and hulks in Britain, and the opening of new sources of materials, such as timber and flax, on the southern continent.[4]

The early colonies had much to do with the sea, in particular for resources and trade. Stories of our early history are filled with evidence that the maritime and naval focus persisted, at least, within the more privileged members of the colony. Indeed, John Hunter, the second Governor of the Colony, began very early to build a 'Naval Department' and supplied the colony with many of its

first vessels. However Phillip had left instructions that Hunter should under no circumstances allow any type of sea craft to be built for the use of individuals.[5] This might provide at least part of the puzzle as to why the majority of Australians even today understand very little about our maritime heritage and dependence, while the Government has focused to one degree or another since colonisation, on the development of naval power, merchant shipping and the necessary expansion of seaborne trade.

What this may suggest, is that for the wider population our maritime heritage hasn't been 'lost', but that it was never really acknowledged. Early colonisation and the practices of the Governors may have had a direct bearing on this, when the implications of the colony being populated largely with convicts are considered. Many convicts had spent months or years in the foetid prison hulks, all ex-Royal Navy warships, awaiting trial. This was followed by the approximately eight-month long voyage chained below decks. The sea and the Navy thus formed the convict's first experience of prison. Secondly, Phillip's mandate that no convict be allowed to build and use any type of sea craft once in Australia (obviously with the possibility of escape in mind) turned the sea into the bars of an even greater prison. While few convicts were transported for life (most sentences were six years), the sea would remain a barrier to return to the home country.

Further than that, the First Fleet arrived in Australia expecting a bountiful land that would easily support their needs, but found the land to be largely inhospitable. This at least for a time, turned the convict's perspective continental, as the new struggle was against the harsh Australian landscape and in so many ways their livelihood relied upon its being conquered. Add to this the fact that as time wore on many sailors deliberately deserted their ships in Sydney and headed inland. As a result they were unlikely to admit their method of arrival in the colony and deliberately left their maritime knowledge and background behind.[6] There is some anecdotal evidence that suggests that they too turned to continental pursuits, and worked on railway construction and the building of other infrastructure.[7] It may also be fair to say that as the colonies grew and infrastructure expanded people were gradually moved, physically and psychologically, further and further from the sea, until in their knowledge and memory supplies and other resources came by land and from the land.

The ANZAC legend is another example of how history can be interpreted. For all intents and purposes it has provided Australians since 1915 with a set of collective values, beliefs, sentiments and approaches to life. Since its 'birth'[8] it has been one of the greatest defining elements of our nationhood and is referred to as the primary point of reference for our national pride and spirit.

However, it also upholds a continentalist perspective in terms of military engagement, and a skewed perspective of Australia's full contribution to World War I. Historically, we know that the majority of our troops were deployed to the Western Front, and that the campaign at Gallipoli was the first involvement in the conflict by the Australian & New Zealand Army Corps (ANZAC). Gallipoli was neither the first Australian operation of the war (that occurred in German New Guinea in 1914) nor the most costly. In seven months Australia suffered some 27,000 casualties, including 8,000 killed or missing. During its seven **weeks** on the Somme in Jul-Sep 1916 (covering the battles for Fromelles, Pozieres, Moquet Farm and Thiepval), the 1st ANZAC Corps suffered over 28,000 casualties, including 8,600 killed or missing. The ANZAC legend exemplifies the power of history in the creation of a strong national identity. However, it also represents the kind of historical amnesia that can impact on national identity in the longer term, if other important events in our national history lose their visibility. The question for Australia is what part the ANZAC legend should play in our national identity into the future. The recent campaign to give greater visibility to the 'Battle for Australia' in World War II alongside the ANZAC legend is an example of the move to broaden our national identity based on an expanded historical base.

Finally, very few Australians are employed directly in seagoing activities. The Royal Australian Navy has some 18,300 personnel, including reserves. The pool of Australian owned shipping is small and overall employment in the Water Transport industry is approximately 15,000, not all of whom are seagoing.[9] The commercial fishing industry employs approximately 28,000 in the resource capture process. In all, in an island nation with a population of 20 million, less than 0.3 per cent go to sea for a living. It is an indication of how Australia views the sea, which is its trading lifeline, that the Australian Bureau of Statistics, the Government's official demographic collection and analysis agency, does not maintain distinct statistics on seagoing employment.

These are just a few potential keys to understanding how the maritime focus in Australia might have shifted to a continentalist one. If a continentalist perspective is not what we want to take with us into the future, then we must collectively re-examine the significance of the maritime environment within which Australia has always operated, and arrive at the conclusion that Australia's *maritime* heritage is a substantial and undeniably important aspect of *Australia's* heritage. For Australia to be a truly effective maritime nation within existing and future world orders, we must learn as a nation all of the relevant lessons of our past and draw on our significant resources, not the least of which, is our maritime experience and heritage.

Notes

1 Ang, I., *Intertwining Histories: Heritage and Diversity*. Paper presented as the 2001 Annual History Lecture for the History Council of NSW.

2 Ibid, p 1.

3 Frame, T.R., *The Garden Island*. Kangaroo Press, 1990.

4 Ibid. See also Blainey, G., *The Tyranny of Distance: How Distance Shaped Australia's History*. Pan Macmillan, 1983.

5 Hadley, L. *From Jack-staff to flagstaff: Australia under Navy Rule*. Paper presented to the 2003 King-Hall Navy History Conference, p 5.

6 Nicholls, B., *Sailors to citizens, citizens and sailors, citizens to sailors: Naval Men and Australia - First Settlement to 1914*. Paper presented to the 2003 King-Hall Navy History Conference, pp 1-2.

7 Ibid, p 2.

8 For a theory of how the ANZAC legend was deliberately fostered by the media, see for example Williams, J., *ANZACS, the Media and the Great War*. UNSW Press, 1999.

9 Includes international sea transport, coastal water transport and inland water transport.

Published as Issue 13 November 2003

Australia's Needs for Maritime Area Air Defence

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Any operation undertaken by the ADF will necessarily rely heavily on Sea Power and maritime transport to move, protect, project, support and sustain troops and equipment, both in transit and when in an area of operations. This clearly requires the ADF to be able to gain and maintain Sea Control and Control of the Air to allow us to use an area for our own purposes for a period of time and, if necessary, to deny its use to an adversary. As an island nation, this control will be critical for *all* ADF operations offshore and even for most operations on Australian territory.

Control of the Air is defined as that ability to use the third dimension and the surface below it, without being threatened or attacked by an opponent's air power. It is the prerequisite for successful military operations, both in attack and defence, in the presence of a hostile air threat.[1] *Sea Control* is that condition that 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. This includes *the air space above*, the water mass and seabed below, adjoining land areas, and the electromagnetic spectrum.[2]

The current Surface-to-Air Missile (SAM) systems in RAN ships are no longer capable of ensuring Control of the Air, nor of defending against most modern Anti-Ship Missiles (ASM). RAN warships can provide only limited protection for themselves, and offer little ability to provide air defence for other high-value assets such as amphibious/sealift ships carrying Australian troops. There are a number of highly capable and modern combat and weapon systems that do provide an excellent air defence capability over a much wider area. It is essential that such a capability be included in the Navy's new destroyers if the ADF is to develop the ability to successfully operate away from Australian shores.

To provide complete protection from an air threat, there is a clear requirement to be able to engage a threat as far away as possible. Protecting other dispersed units from air attack at long range is known as 'Area Air Warfare', as distinct from 'Anti Ship Missile Defence' which refers to the close range protection

(within 20 km) of one's own ship. The RAN introduced an Area Air Warfare capability with the *Perth* class guided missile destroyer (DDG) in the 1960s, however these have all now decommissioned.

The *Adelaide* class guided missile frigates (FFG) currently in service use the same Standard SM1 missile as the DDGs. First developed in the 1960s, the SM1 has a nominal range of 50km. Modern regional anti ship missiles can now be fired from aircraft well outside that range (in excess of 120km) and many anti-ship missiles can out-manoeuvre the SM1 missile. Additionally, the FFG can only engage two air targets simultaneously, whereas many countries increasingly have the ability to program multiple missiles, fired with impunity from outside SM1 range, to arrive simultaneously and swamp a ship's defences. Furthermore, the SM1 missile requires a dedicated Fire Control radar to illuminate the target throughout its flight, which provides warning to the aircraft that it is being targeted and gives the pilot time to evade. In addition to these technical limitations, the SM1 missile is no longer in production and consequently the system has a limited support life.

There are a number of future ADF capabilities being developed to facilitate Control of the Air. These include the new destroyer (the so called 'Air Warfare Destroyer'), the Joint Strike Fighter (JSF), new Air-to-Air Refuelling (AAR) aircraft, Airborne Early Warning and Control (AEW&C) aircraft, Over the Horizon Radar (OTHR), and new generation Army Ground Based Air Defence (GBAD) systems. It is critical that these capabilities work as a complementary package, as no single capability will see its potential maximised working alone. The concept of Network Centric Warfare (NCW) is being developed to provide connectivity between these assets to share tactical and targeting information and ensure that the 'whole is greater than the sum of the parts'.

Importantly, an Area Air Warfare combat system in the new destroyers will act as a force multiplier, by allowing surveillance aircraft to operate over a much wider area. The extended range of the destroyer's missile envelope means that such aircraft can operate independently, then safely retreat under the protective umbrella of the ship once an emerging threat is detected. This will enable them to operate effectively even in situations where fighter escort is unavailable, which will significantly extend the surveillance capabilities of a deployed Task Group and free up the JSF to conduct other tasks.

Modern Area Air Warfare systems, such as the AEGIS system employed by the United States, Spain, Japan and Korea, have a true Area Air Warfare capability. The *current* generation of missile used by these systems—the Standard SM2—has a range in excess of 160 km, allowing hostile aircraft to be targeted and destroyed well beyond the range of most anti-ship missiles, such as Exocet and

RIM-66M-2 Standard SM2-MR surface-to-air missile

Harpoon. This allows them to not only provide for their own protection, but to protect friendly maritime, land and air assets operating over a large geographical area. Moreover, the SM2 missile is far more manoeuvrable than the SM1 and modern high performance combat aircraft, improving the probability of interception.

The Phased Array radar technology incorporated into these systems has fixed antennas that allow the radar beam to be electronically steered to any point in space. The radar is controlled by the combat system to focus its search in areas of highest threat, or where targets have already been detected. This permits a much higher update rate of areas (and targets) of interest and allows the radar to accurately track both the missile and target and to pass updated orders to the missile in flight. It also permits up to 14 targets to be engaged concurrently which will counter the simultaneous arrival of multiple anti-ship missiles discussed earlier. Furthermore, the system only requires the target to be illuminated with Fire Control radar in the final few seconds of homing, which means that the aircraft does not have advanced warning that it is being engaged. Further variants of the SM2 missile will enter service in the next 5-10 years that have even greater utility; including a significant capability over land. This will be important in providing Control of the Air for land operations in the littoral, with the ability of the ship to integrate with the Army's ground based air defence systems.

Advanced Area Air Defence combat systems also have upgrade paths to allow the full potential of the next generation of missiles to be realised, some of which may be used for Theatre Ballistic Missile Defence. While the Government is yet to decide on whether this capability will be required by the ADF, and it is *not* a driving force behind the requirement for an Area Air Warfare capability,

it is an attractive benefit. A further advantage is the potential to remain fully interoperable with key allies, particularly the US and UK. This provides a niche capability that is similar to that fielded by the US, and which can be easily upgraded by leveraging off US technological developments. This is very much in our own interests as well as those of any coalition, and will provide the Government with further options to provide a meaningful (rather than symbolic) contribution to high-end coalition operations.

On 7 November 2003 the Government announced the outcome of its review of the Defence Capability Plan (DCP) in light of changes to the strategic environment, recent operational experience and more mature costings. In recognition of the need to enhance the protection of troops being transported and deployed from air attack, the RAN's air warfare capability is to be substantially enhanced. Four of the *Adelaide* class FFGs will be upgraded with SM2 missiles to increase their air warfare capability. In addition, three new destroyers will be acquired, incorporating the SM2 missile and a combat system probably derived from the AEGIS system currently in operation with the US Navy. This will provide the ADF with a capability to detect, track and engage simultaneously multiple aircraft at ranges in excess of 150km. To offset these enhancements, the two oldest FFGs will be laid up from 2006 when the last of the *Anzac* class frigates is delivered.

Clearly, the optimum solution for ADF Area Air Warfare is a complementary package of ships, GBAD, JSF and AEW&C aircraft. However, Australia's geography and the increasingly mobile focus of short-notice ADF operations mean that surface combatants may be the only assets available to project power over a large area of operations. Additionally, ships operating in international waters may often be the only politically acceptable option for the government to use in a tense situation without the risk of escalation. In essence, the Navy's new destroyers will often be the only ADF assets with the range, capability and attributes to ensure both Sea Control and Control of the Air in many of the areas the ADF is expected to operate in. The Government's decision means that the Navy's next generation surface combatants will have a robust, modern and highly capable Area Air Warfare capability, providing the ADF with a credible ability to gain and maintain Sea Control and Control of the Air.

Notes

1 *Fundamentals of Australian Aerospace Power*, Defence Publishing Service, 2002.

2 *Australian Maritime Doctrine*, Defence Publishing Service, 2000.

Published as Issue 14 November 2003

Australia, Imperial Trade and the Impact of War

Mr Mark Bailey

A trade system may be defined as *carrying capacity* used efficiently. Its purpose is to move tonnage and volume at minimal capital and operating cost, while making sufficient profit to replace expended capital and resources and expand the infrastructure available. Trade is a global entity, and the trade of the British Empire was a mutually interdependent subset of the global trade system. Attacks on shipping in 1914–18 and 1939–45 impacted significantly on the efficiency of the system. System efficiency loss comes from the fact of attack, more than from any other factor, because this forces the system to change in ways for which it was not designed. Ship sinkings cause change, and are important, but most trade system disruption flows from *the fact of attack*, not from sinkings *per se*.

Before WWI, Imperial trade was carried out with surprisingly few resources. The capital investment of £405 million in 1913 was about equal to that of two large European railway companies. The Empire possessed 3,888 oceangoing ships of over 1,000 gross registered tons (GRT), comprising about 50 per cent of the world total. Trade types were in two general groups—Liner and Tramp. Liners were operated by large well-administered companies that were sensitive to competition. They moved on fixed schedules with high value cargoes that mostly changed out at each port. Only about half of them carried passengers. Tramp companies were small, with cheap, simple ships, and each voyage was a separate venture. They mostly carried bulk cargoes between ports, or on time charter. Ships swapped from one trade to another as needed and were replaced frequently—in 1913, only 32 per cent of ships had been built before 1900.

In August 1914 the world was even more globalised than today. The impact of war wrecked financial markets, stock exchanges in 20 nations collapsed, and the international credit market was destroyed. All trade stopped until the War Risk Insurance Scheme was introduced—owners could not get insurance, and they could not run ships uninsured as one or two losses would destroy a company. The British Government underwrote this scheme and the great Imperial Shipping Associations ran it. It was also a powerful trade control mechanism, as the Government refused insurance for unnecessary or luxury cargoes, thereby freeing shipping capacity for essentials. Simultaneously, massive shipping

requisitions started (4 million GRT in 1914 alone). The tramp trades were ruined, leading to a temporary global tramp tonnage glut. Freight rates then began rising relentlessly as requisition for military use drained carrying capacity from the global system. Above all else, economy of carrying capacity became a critical government concern.

From August 1914 the free market began to disintegrate, and a global control trade system was instituted. Freight rates were fixed under 'Blue Book' rates for requisitioned ships, and rates on the remaining 'Free' market soared, reflecting global tonnage pool shortages of ships. Port congestion, loss of close resource sources, and longer voyages for less cargo imported raised a new and unexpected factor: that *tonnage could increase but system carrying capacity could decline*. From 1915 the Government began taking over entire trades as monopolies. Australian wool, wheat, and meat exports became Commonwealth monopolies. Shipping control grew via licensing mechanisms, but there was still no national or Imperial plan for imports. Sinkings outpaced building during 1915, and on 27 January 1916 the Shipping Control Committee projected an import deficit of 13 million tons for the year. This illustrated the limits of import control by licence.

On 25 May 1916 the Empire possessed 3,572 oceangoing steamers, of which 1,313 were requisitioned, 680 were Government directed, and 1,579 were 'free'. However, 'free' ships were license controlled and their refrigerated space was government controlled. In 1916, the Government realised that success required global management of *carrying power*. On 11 October 1916 grain imports became a government monopoly, and from 22 December 1916 the Ministry of Shipping instigated full control of all shipping. This, and the shipping losses of 1916–17, created a carrying capacity crisis that stripped ships from the longer routes for 'Atlantic concentration'. International shipping administration through the Allied Maritime Transport Council led to efficiency of import control measures. By 1917, 56 per cent of the ships of 1913 imported 68 per cent of the imports of 1913. The UK developed methods to prioritise all imports against each other.

In 1914 the Australian export markets in Europe vanished overnight, limiting exports to Imperial destinations (no re-export to neutral countries was permitted). The UK asked the Commonwealth Government to purchase all export meat and grain as its agent. However, there were too few ships to carry the tonnages, which were shipped as top up stock only, and most grain had to be stored. Much rotted or was destroyed by mouse plagues. By 1915, shortage of carrying capacity was fully conditioning Australian trade. The problem was distance—5,000 tons of food imports to the UK needed 15,000 ship-tons from Australia, 10,000 from Argentina, and only 5,000 from the USA or Canada.

As most trade was carried in Imperial, not Australian hulls, Australia was very vulnerable to loss of carrying capacity. Due to its isolation at the furthest limit of the Empire, Australian trade was the first to be abandoned and the last to be re-instituted, being used to top up British imports and supply the closer demands of Italy and France. Australian trade was only kept going in WWI by Britain's need for 30,000 tons of frozen meat per month not elsewhere available, and the fact that there was 75,000 tons of dry cargo space available in these refrigerated ships. Basically, Australian trade was seen as expendable and was stripped early. This perceived disregard for Australia's economic health, together with the perceived reckless expenditure of Australian lives on the Western Front, may have helped shape a more independent view of Australia within the Empire.

Requisition and control was run down from November 1918, but on 30 June 1919 18 per cent of ships were still requisitioned. Control of shipping continued until April 1921 due to the need to lift huge grain, butter and meat stockpiles in Australia and New Zealand. The government quickly released government-built and operated ships to industry to restore the private lines, but the Empire had lost entire trades to American and Japanese lines during the war. The critical strategic lesson of the WWI carrying capacity management system was that *logistics sets the borders of the possible* in war.

In 1933, the Headlam Committee considered the merchant fleet equal to the task of supplying the UK during war. In 1939 it was proven wrong, as imports declined steeply. The subsequent Hoare Report of 1940 demonstrated the inadequacies in British prewar assumptions. Shipbuilding, ports, and rail were all inadequate, losses outpaced building by 5:1, and imports were down from 50–55 million tons in 1938 to 26 million in 1943. All of this had a profound impact on Australia, where trade still relied on Imperial, not Australian hulls. Despite the harsh lessons learned in WWI, in WWII, international management of shipping was far less advanced due to America's refusal to accept the need for it. The loss of Allied and neutral shipping fleets in the early war years added to the British burden on global carrying capacity. The British Government, under Churchill, ignored the lessons of WWI and carried the Empire deep in to strategic overstretch. Churchill also believed that he could control America, gambling the Empire on logistic dependence on the USA—and losing. The result was overt US control of UK logistics by 1943.

German U-Boats operating in concert

In February 1941, 25 per cent of Imperial dry cargo tonnage was awaiting repair. Port carrying capacity losses due to congestion *alone* equalled losses to all enemy action. The convoy system cost 10–15 per cent of carrying capacity, requisition and military use cost even more. Sinkings outpaced British construction, and only US shipbuilding resolved the situation in 1944. The trade system existed to feed the civil economy, the use of shipping for military purposes was at the cost of civil use. British miscalculations were demonstrated in Africa where the decision to fight a major theatre war was logistically imprudent. All infrastructure had to be brought in, and this meant that the best, fastest refrigerated cargo ships were used, stripping the Australian trade. A cargo to Port Suez often meant a global circumnavigation for the ship as cargo was collected in Singapore, Auckland or Sydney. By early 1943 the UK was faced with either supporting military operations or imports to stop starvation. Part of the answer was again Atlantic concentration by slashing all non-Atlantic trades. Among the effects of this policy were the 1943–44 Bengal famine and the near cessation of Australian trade. Only 20 per cent of the merchant fleet was being used to support the British economy, yet, astonishingly, some US authorities believed the UK actually had surplus tonnage they could use.

The situation for Australia was worse than in WWI, as the British Government was more self-focussed, wanting to use Australian resources but offering little in return. By April 1941 UK exports were at the minimum needed to sustain Dominion war efforts. However, from 1942, there was a large US build up in the Pacific, and Australia and New Zealand were the only local sources of supply. There was deliberate American pressure on Australia to divert UK trade to supporting US forces in the Pacific. In the end, it was only this that absorbed Australian export surpluses. Most Australian export industries collapsed during WWII. The export wheat trade was a prime example, falling from 125 million bushels in 1938 to just 19 million in 1945.

Most Australian interstate coastal shipping was requisitioned for war use. The pressure for freight rate rises started in 1940, but was mostly resisted, and by December 1941 they were irrelevant due to a lack of shipping. In addition, there was a severe decline in overseas shipping visiting Australian ports, port movements by 1945 falling to 40 per cent of 1939 figures. A Central Cargo Committee was formed in early 1942 to ease port congestion and sort out refugee shipping fleeing the Japanese advance. The Ministry of Supply and Transport, and the Australian Consultative Shipping Council were subsequently formed to oversee participation in international control systems. They acted to minimise non-essential cargoes, maximise exports, and minimise coastal shipping use.

In both wars, there was a greater affect on Imperial trade from the *fact of attack* than from the actual *losses* inflicted. In both wars, carrying capacity was stripped from the Australian trade, and entire export industries were lost, or reduced to expensive (in carrying capacity terms) 'top-up' sources. Also in both wars, special circumstances gave Australia and New Zealand an 'out'. In WWI, Britain purchased the exports but only lifted what she had to. In WWII, local and regional presence of large US forces consumed the export surpluses. Australia lacked the industrial capacity or political will to develop the business environment that allowed an efficient merchant fleet and military industrial base sufficient to control her own logistic destiny. In essence, Australia was a logistic mendicant during both wars. This placed limits on government, and forbade Australian strategic independence to the point where Australia had little voice even in the strategic councils of her Allies. Given that Australian trade is still reliant on non-Australian ships, the implications for Australian trade and the impact of future disruptions to the global trading system remain issues of concern.

Published as Issue 16 December 2003

Editor's Note: This is a summary of a paper presented at the 2003 King-Hall Naval History Conference. Sources for this article will be contained in a forthcoming SPC-A Paper in Australian Maritime Affairs.