

THE NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA



Keeping Watch

A History of the Navy League of Australia 1895-2015

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See page 30

THE KANGAROO AND THE DRAGON

CREATING THE 21ST CENTURY NAVY

GERMAN NAVAL OPERATIONS IN THE BALTIC 1945

FORMATION OF NAVY PART II ~ THE ISRAELI DEFENCE FORCE NAVY, 1960-1979

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THE NAVY

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Front cover: RNZN 75 Operation Neptune International Fleet Review, ships Left to Right (continued on back cover) HMNZS TE MANA; BACH ESMERELDA; (inspecting Ship HMNZS OTAGO); RSS RESOLUTION; KRI BANDA ACEH; JDS TAKANAMI; CNS YAN CHENG; ROKS CHUNBUK; INS SUMITRA. HMAS DECHANEUX alongside in Devonport and USS WILLIAM P LAWRENCE alongside in Auckland. Image SJRA

THE WORLD TURNED UPSIDE DOWN*

This issue maintains The NAVY Magazine themes, with Paper 1 dealing specifically with historic, geostrategic issues in the South China Sea and Paper 2, with Australian Industrial Maritime Strategy (AIMS), for Navy. Paper 1 is also the winner of the 2016 essay competition, professional category; while Paper 4, dealing with German Naval Operations in the Baltic at the end of WWII, is the winner in the non-professional category. There are specific issues emerging from Paper 4 that have a sad echo with the mass migration, by sea, occurring in the Mediterranean today. Paper 3 takes forward the development of the Israeli Defence Force Navy, from 1960 to 1979 covering the revolution in naval affairs (RNA) when anti surface / ship missiles were first deployed and gas turbines began to replace steam. Taken together, the four papers point towards a number of connecting issues as relevant today, as they were then.

It seemed apt to begin this editorial in terms of a world apparently turned upside down, as during the British Civil Wars, when the King was overthrown and beheaded, and the American Revolution when the King was thrown over. In the previous issue it was noted that 'the sense of revolt if not

revolution is in the air'. Perhaps with the results of the U.S. elections giving Trump the Electoral College vote and Clinton the majority of votes cast, by a narrow margin, this has more the hallmarks of a revolt. Time will tell but what appears clear is that in the Common Law, Common Wealth, English speaking democracies (including India) – what Julian Lindley-French calls the Global West (see The NAVY Magazine Oct-Dec 2016: *The Global West is all at Sea*) – the old world is being turned upside down. The elite political managerialist classes, seemingly beginning to form their own familial, regal dynasties, are being turfed out by a significant group of disenfranchised voters, who have found the ballot box. These 'revolts' appear connected, in time and space – as the British Civil Wars were with the thirteen colonies that went on, through revolution, to become the U.S. The questions may be both 'what now' and 'so what'?

Writing separately on the South China Sea, a sailor and friend of The NAVY Magazine and Australia, Dr Jean Jonathan Bogais, has extensively researched South East Asia. He correctly identified the popular appeal of President Duterte before he was elected and why, despite considerable

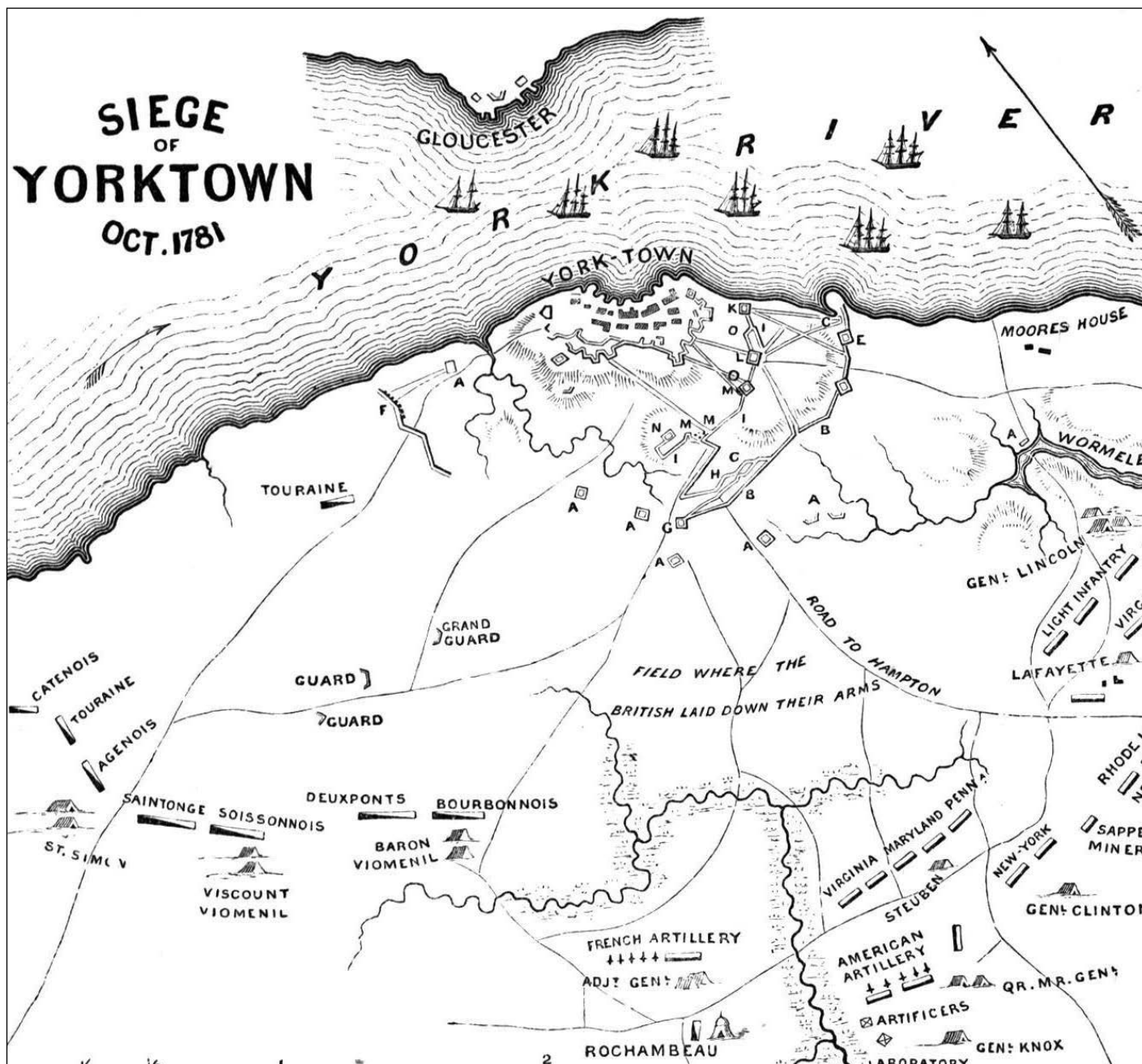


Figure 1 Yorktown Siege Map from The American Revolutionary War.

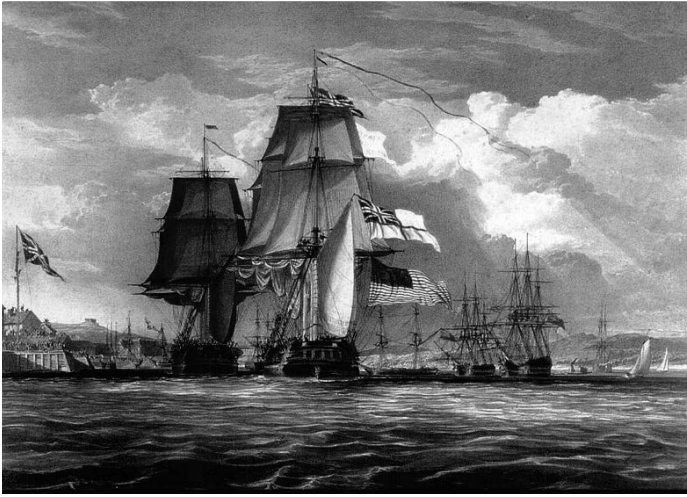


Figure 2 John Christian Schetky Painting HMS SHANNON Leading the captured American Frigate USS CHESAPEAKE into Halifax Harbour in 1813 (painting circa 1830).

international criticism on Human Rights, Duterte might be in a better position to deal with both China and the U.S. over the Philippine reefs appropriated by China, than his predecessors. That Duterte has so far been able to diffuse a tense situation while allowing all sides to save face by maintaining status quos, albeit unintentionally, through a process of 'ambiguous asymmetric counterbalancing' (AABC), may suggest that alternative, less confrontational strategies are possible. Bogais' analysis also suggests that positively enforcing old geo-political (rules-based) order may act to symmetrically solidify existing tensions; rather than allowing for de-escalatory change-innovation.

Returning to the 'Now' and the 'So', the issues confronting the Global West may, as Lindley-French affirms, be 'largely at sea'. And while the denouement might well be on land, the maritime allows for a degree of geo-political manoeuvring not always possible ashore. More significantly, in our archipelagic region, the keys to our three peninsulars and bays are:

the islands of Diego Garcia (U.K.), Cocos (AS) and Singapore which, together with Guam (U.S.) and Darwin (AS) [juxtaposed with Jakarta (and Indonesia)], provide asymmetric network-pivot axes that can influence, monitor and impact each of the three bays – without getting one's feet dry. [1]

This is a powerful position to be in. Looked at from China's perspective, it could appear very much like a containment policy – with historic parallels to the U.K. Embargo Act of 1807 that resulted in the War of 1812 between the U.S., Canada (as it would become) and the U.K. Defeats on both sides and peace in 1815 culminated in the U.S. 1817 Navigation Act – an act with historic, maritime relevance to UNCLOS and aspects of what we see in the South China Sea, today.

Duterte was in a position to exercise more political freedom of manoeuvre (PFOM) than his predecessors. This actually enabled a non-appealing return to pre-existing status quos, if not the resolution of the underlying conflict. In complex situations, maintaining / *asymmetrically balancing* status quos may be the least worst option. This returns to the election of President Donald Trump, which so many pundits, pollsters and political elites dismissed as being a ridiculous proposition. Churchill speaking on Remembrance Day 1947, quoted:

Many forms of Government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all-wise. Indeed it has been said that democracy is the worst form of Government except for all those other forms that have been tried from time to time....

Democracy is about change and finding ways of affecting change, other than by conflict. Democracy is not about preserving tyrannies or for exclusive self-aggrandising elites. It is about:

the humble, common [person], just the ordinary [folk], who go off to fight for [their] country when it is in trouble, go to the poll at the appropriate time, and put their cross on the ballot paper showing the candidate [they] wish to be elected... that is the foundation of democracy. Together [with elected representatives] they decide what government, or even in times of stress, what form of government they wish to have in their country. If that is democracy, I salute it. I espouse it. [2]

As for Duterte, it is possible that President Trump will have more PFOM than other more rule-based candidates might exercise. This should play to the strengths of Australia, in allowing alternative and potentially novel ways of balancing the existing status quos within the South China Sea and so avoiding conflict. It may, in fact, be as good as it gets. To do this, Australia will need to maintain its watch and hold firm to its maritime democratic values and principles – the two are inimitably intertwined in any case. This requires a strong and vibrant Navy; supported by an industrial base and Merchant marine. It is not one or the other(s), see page 32.

One cannot control complexity. In fact, the more one tries to do so, the more chaotic, uncertain and unstable results can become. The Global West, and particularly the Commonwealth and Common Law democracies, is changing. The U.S. and many democracies are in a state of flux. President Trump may allow the U.S. to get to where it is going quicker than those



Figure 3 Scarborough Shoal.

adhering to self-preserving rules; specifically those belonging to exclusive elites. Ironic and painful as it may seem, democracy has turned over in 2016. The common folk are giving clear indication of the need for new direction and an alternative compact. It remains to be seen how the 2008 Global Recession will end. The Great Depression lasted ten years and ended in 1939... Many old sailors who parade on Remembrance and Anzac Day would concur with Churchill that it 'is better to jaw, jaw than war, war'. The Ballot boxes have spoken – there may be wisdom in listening to the voices; avoiding war where we can and being eternally 'ready, aye ready', should we again need to steer that way. That is what Navy is about – maintaining the golden thread connecting our pasts, presents and our futures Blake, Nelson, Nimitz and Fleet, to Curtin, Roosevelt and Churchill.

*The World Turned Upside Down was a British Civil Wars protest ballad first sung in the 1640s in opposition to the policies of Parliament. It was allegedly played at the surrender at Yorktown in 1781, after General George Washington insisted Lord Cornwallis played 'a British Army or German march' rather than a tribute to his Army. It may be connected in part to the 1975 Diggers song.

REFERENCES

- 1 See Jonathan Hemlock, *China Asymmetry: Preventing the Dragons Tears*. The NAVY Magazine, Jun-Aug 2016.
- 2 Churchill speaking in the House of Commons, 8 December 1944, shortly before being defeated in the 1945 Khaki election and thrown from office.

AN OUTSTANDING CONFERENCE IN ADELAIDE!

The 2016 Navy League of Australia Conference was held in Adelaide. It was an outstanding success. All State Divisions were represented in strength. Indeed, overall attendance was the largest for quite some time.

Conference began on Friday morning when we all boarded our big bus for a visit to Techport Australia at Osborne where we were given a guided tour of the ASC shipyard. Members of Federal Council were given a detailed run down of the RAN's Hobart Class air warfare destroyer building programme (SEA4000) and saw the assembly of parts for Brisbane, (due to be launched in December) and Sydney (about 57% complete). We inspected (from alongside) NUSHIP Hobart. Group photos were taken with the ship as a backdrop. NUSHIP Hobart had just successfully completed Builder Sea Trails.

It is some time since I was last at Osborne. I was impressed with the extent of the shipyard development. Equally impressive was the amount of space available for further development.

After all that, we were off to RAAF Edinburgh, the home of 92 Wing and the AP-3C Orion maritime patrol aircraft. After lunch at the RAAF mess we were given a two hour presentation on the P3's operations and on the aircraft which is to replace it, the P-8 Poseidon. It seems that the P8 will operate in a different way to the P3.

That evening we held the AGM where some new faces were added to the Federal Executive. The average age of the Federal Executive was thereby reduced!

The following morning Federal Council began. As ever we received reports from all of the State divisions. The range of activities reported on was seemingly infinite. An annual Oration given by a senior naval officer; sponsoring a yacht race; Trafalgar day lunches or dinners; liaison with local Navy establishments; support for commemorative services; discussion groups and think tank roles; and support for the Australian Navy Cadets. As this summary shows, the League State Divisions are all busily involved in maritime related activities.

We also received a report from the New Zealand Navy League. The Royal New Zealand Navy is this year celebrating it's 75th Anniversary. It is some twenty years since the League last held it's Conference in Adelaide. After the success in Adelaide in 2016 I can confidentially predict that we will be back in a much shorter time.

But not so soon as next year. Federal Council has determined that the 2017 Conference will be held in Canberra

NAVY LEAGUE ANNUAL MARITIME AFFAIRS ESSAY COMPETITION

There was once again a strong field in the Navy League Annual Maritime Affairs Essay Competition. After due deliberation the judges decided the prizes should be awarded to -

PROFESSIONAL CATEGORY		
	\$1000	Greg Swindon The Kangaroo and the Dragon Australian – Chinese Naval Relations 1900-2016
	\$500	Cameron Eadie Australia's Maritime Industry Strategy
	\$250	CAPT George Galdorisi Dealing with Two Superpowers: Australia must deal with what China and the United States want

NON-PROFESSIONAL CATEGORY

	\$500	Geoff Crowhurst German Naval Operations in the Baltic 1945
	\$200	Kevin Beard China and the Mahan Trap
	\$150	Andrew Ng HMS Prince of Wales

Congratulations to all the prizewinners. Their work will be published in *The Navy*.

KEEPING WATCH

The Federal Council congratulated Malcolm Longstaff upon the successful conclusion of the Navy League history project. This excellent book was reviewed in the previous edition of this magazine. Details of how readers might purchase this highly recommended publication appear in this edition of *The Navy* and can also be found on the League website navyleague.org.au.

LEAGUE STATEMENT OF POLICY

Navy and defence issues always form an important part of our Annual Conference. This year our defence discussions began with an excellent presentation by John Jeremy, our Senior Vice President. The presentation covered many of the issues of interest to the League and was a good lead in to the subsequent Federal Council discussions. There followed "a spirited and lively debate" (to quote from the Minutes) on a range of defence issues. It was a worthwhile session much appreciated by all present. At the conclusion of the defence discussions it was agreed that it was important to keep the League Statement of Policy up to date. All Divisions were asked to take part in a review of the Statement. At this moment the review is ongoing.

NAVY LEAGUE PERPETUAL TROPHY

Each year the Navy League Perpetual Trophy- Community Award is given to the Royal Australian Navy ship or establishment which has made the best contribution to the community.

The nominations for the Award go Fleet Command. From those nominations the Fleet Commander provides a shortlist of three for the consideration of Federal Council. This year the three nominations which made the shortlist were HMAS DARWIN, HMAS CRESWELL and HMAS WATERHEN. All three nominations were worthy of the Award.

Of course, only one can win, and the 2016 winner is HMAS DARWIN. Although DARWIN had been committed on the high seas the ship was been able to carry out a high level of community involvement, charitable events and fundraising activities. The charitable and fundraising activities were many and varied including Triple Care Farm Open Day, Investa Abseil for Youth, Bunning Barbeque, Aussie Hero Quilts, The Great Shave, HMAS DARWIN 12,000 in 12 Days Challenge, Auburn RSL sub-Branch donation and support of the Australian Navy Cadets.

These and other community involvement and charitable events were carried despite the ship undertaking deployments to South East Asia and in the Indian Ocean. While on deployment HMAS DARWIN apprehended a stateless vessel carrying 7 tonnes of weapons including



Figure 1 NLA AGM Visit to NUSHIP (HMAS) BRISBANE (D39) AIS Adelaide 07 Oct 2016 - Photo Dean Watson.

nearly 2000 AK-47s and on another occasion seized heroin worth \$800 million. The seizure of these weapons and drugs undoubtedly had flow on benefits in many communities. Bravo Zulu HMAS DARWIN – a very worthy winner of the Navy League Community Award.

While I have been writing this page my TV has been reporting that HMAS DARWIN is now off the South Island of New Zealand at Kiakoura, to assist in the rescue of residents and tourists stranded by a major earthquake. HMAS DARWIN had been on its way to Auckland to participate in the Royal New Zealand Navy 75th Anniversary Fleet Review when it was redeployed to Kiakoura.

NAVY LEAGUE STATEMENT OF POLICY

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Figure 3 HMNZS CANTERBURY (L421) undertaking earthquake relief operations off Kaikoura 18 November 2016.



Figure 2 HMCS VANCOUVER (FFH 331) Seaking Helicopter Transfers Stores and Personnel from HMAS DARWIN (FFG 04) as part of HADR Operations off Kaikoura.

There followed “a spirited and lively debate” (to quote from the Minutes) on a range of defence issues. It was a worthwhile session much appreciated by all present. At the conclusion of the defence discussions it was agreed that it was important to keep the League Statement of Policy up to date. All Divisions were asked to take part in a review of the Statement. At this moment the review is ongoing.

Readers will know that the Navy League Statement of Policy appears on the inside back page of each edition of The Navy magazine. From time to time the Statement is reviewed and updated.

The Statement appearing in this edition is a draft of the proposed revised version. The League is at present considering what the final form should be.

If any reader has thoughts or suggestions on the Statement of Policy please let me know. Contact me at president@navyleague.org.au

OBITUARY

JOHN FRANCIS RODERICK STRANG AO

20 July 1940 – 29 September 2016

It is with great sadness that *The NAVY Magazine* advises the death of a good friend and supporter of the Navy League of Australia, NSW Division, and *The NAVY Magazine*. Fittingly and deservedly, John was recently made an Officer of the Order of Australia (AO) 'for distinguished services to the transport and logistics sector'. It could have been awarded for so much more in John's long and successful career – including his most discreet philanthropic support for many organisations. Members and Readers will have seen the prominent advert on page 2 of the magazine that John rang to confirm and update shortly before his death. Likewise, readers will recall the two excellent and prescient papers John wrote about Australia's 21st Century Submarines (Parts I and II, *The NAVY* Sep-Dec 2015 and Jan-Mar 2016). They were prescient in a number of regards, including identifying 'the shortcomings of academia in Australia. (The average research standard of our current top five universities lags well behind that of Japanese, Chinese, British and other countries' seats of learning)'. From which John argued:

Australia should develop a high-powered research lyceum tasked with providing the engineering and strategic thinking skills necessary to develop and support Australia's own nuclear energy and propulsion industry. Such an institution should be new and quite separate from the existing university system, and not based in Canberra.

John also argued in his two submarine papers for concern regarding a possible Japanese option and, while not specifying the DCNS Shortfin Barracuda directly, his conceptual designs for the submarine were largely achieved in the final choice, see *The NAVY Magazine*, Jul-Sep 2016.

In this as in so many things, John was ahead of his times; including a strong desire to upskill and properly educate and train Australians so they might better meet the challenges of the 21st Century; specifically in the maritime and logistic industries.

From a distinguished family of stevedoring, transport and logistics people, John was an entrepreneur. He created, built up and chaired Strang International and left a strong legacy by preparing his children and senior management for their future roles.

John also contributed to Lloyds; to the industry association ICHCA, the International Cargo Handling Association, of which he was chairman for a time, and to the Australian Maritime Network. A detail man and an enthusiast he led by example and inspired by his doing and his acts. In that more Highland and West Coast tradition of the Scottish Enlightenment, he believed in the principles of the manse and that it was through education and bringing on, that emancipation would deliver the goods of Commonwealth. Also in the Scottish tradition, he would never dream of purchasing respectability and favour through his philanthropy. It would therefore, perhaps, be fitting when Australia finally gets round to designing and building a maritime research and education centre, as it will, to call it 'The John Strang AO Maritime Lyceum'.

It was a pleasure to have worked with John and all too briefly to have shared some stories and broken bread. With Alison John's wife, and his children and grandchildren, he will be sadly missed by all who knew him.

ABcSEA75

The 75th Anniversary of the Battle of the Coral Sea occurs 4-7 May 2017. It is understood that General MacArthur's entry into Brisbane in 1942 is to be celebrated but few formal plans are in hand to resurrect a suitable anniversary of the Battle of the Coral Sea, beyond the customary dinner in Sydney. This appears to be a significant missed opportunity.

There were four Pacific Campaigns in WWII: the last British Empire Army's campaign (under Mountbatten and Slim), from India through Burma, in which two standing Japanese Armies were defeated for the first and ever time; the Chinese campaign, ultimately ending in 1949 and the formation of the PRC; MacArthur's SW Pacific campaign, based initially on Kokoda; and, the Pacific Ocean Areas campaign under the Supreme Allied Commander, Admiral Chester Nimitz USN. The most important existential campaign of the time with which Australia was inimitably involved (as subsequently was the British Pacific Fleet) was that under Chester Nimitz. The most significant battle for 'us' was The Battle of the Coral Sea, fought by the USN and the RAN (under Admiral Crace) – operating together for the first time. Without the 'better than a score draw' achieved at the Battle, Kokoda would in all probability have been lost and we may also (certainly) have failed at Midway, 6 Weeks later... It's not too late!!



HMAS AUSTRALIA and Task Group (TG) 17-3 at The Battle of the Coral Sea.

CRESWELL ORATION 2017

**NAVY LEAGUE OF AUSTRALIA,
VICTORIA DIVISION**

Deputy Chief of Navy RADM Michael Noonan AM
Personnel Challenges for the Future RAN Fleet

Wednesday 1st March 2017

TIME: 1200 for 1230

VENUE: William Angliss Institute Restaurant,
550 Lt Lonsdale Street Melbourne
(between Spencer & King St)

COST: \$45 per head

DRESS: Lounge suit / Day dress
Decorations, Medals optional

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RSVP: Monday 13th February 2017



THE KANGAROO AND THE DRAGON AUSTRALIAN - CHINESE NAVAL RELATIONS 1900 - 2016

By Greg Swindon

The history of the Australian Navy and China goes back over 100 years and is a mixture of open hostility, imperial gunboat diplomacy, suspicion and distrust. Since the 1970s a slow but guarded rapprochement has ensued. Australia's current one China policy recognises the People Republic of China, but this has not always been the case with Nationalist China (Taiwan) previously accepted as the legitimate China up until 1972. Additionally much of Australia's early naval interaction with China was part of the over-arching British Empire relations with the Nationalist Government. This paper examines Australian and China naval relations over the past 100 years and how this may impact their futures.



Figure 1 HMCS Later HMAS PROTECTOR in 1901.

Future naval relationships between Australia and China remain uncertain, much as it has for the last 100 years, just as the stability of the region that both navies operate in is also uncertain. The ongoing matters regarding the 'ownership' of rocks and islets in the South China Sea, and its associated freedom of navigation concerns, the Taiwan Straits issue, angst between China and Japan over island ownership in North East Asia and the continued bogey man status

of North Korea all create a level of instability which is dangerous and unsettling. While Australia seeks to play an 'honest broker' in the region and counsels ongoing and increased dialogue the future remains unclear and potentially dangerous.

BOXER REBELLION 1900-01

The Australian Navy's first interaction with China was during the 'Boxer Rebellion' (Third China War) of 1900-01. Throughout the 1800s various major world powers had commenced aggressive trade with China and forcibly carved out concessions for their respective empires. These included Great Britain, Japan, Germany, Russia, France, Italy and Austria-Hungary. Britain fought two previous wars with China, in 1839-42 and 1856-60, with France supporting Britain during the latter war which saw the Treaty of Tientsin, signed in 1858, effectively open up China to western trade. Japan also fought a brief war with China (the First Sino-Japanese of 1894-95) for control of the Korean Peninsula which resulted in the destruction of much of the Chinese Navy. This foreign intervention caused a rapid decline of Imperial China which, despite internal dynasty changes, had been relatively stable for many centuries.

The effect of these wars, coupled with the rapid expansion of Christianity throughout China by foreign missionaries, caused the rise of the Society of Righteous and Harmonious Fists (the Boxers) to expel the foreign powers. Attacks on foreign missionaries and traders commenced in 1898 and reach their zenith in June 1900 when the foreign legations in Peking (Beijing) were besieged. Britain, desperately short of troops due to the ongoing war in South Africa (1899-1902) accepted support from the colonies of New South Wales, Victoria and South Australia.

New South Wales and Victoria provided a Naval Brigade of 250 and 200 men respectively to serve ashore while South Australian gunboat HMCS PROTECTOR served with the Royal Navy fleet in the Gulf of Chihli (Bohai Wan). The Queensland Government offer of the gunboats GAYUNDAH and PALUMA was not accepted.

PROTECTOR served in Chinese waters throughout September – November 1900 before returning to Adelaide in early January 1901. The naval brigades arrived in China in early September 1900 after the siege of the Legations was lifted. While scattered fighting continued the 'Australian' sailors were employed with policing and 'peace



Figure 2 HMAS PSYCHE in Hong Kong circa 2016 she was commissioned into RAN from RN in 1915.

keeping' duties. The naval brigades returned to Australia in April 1901 and Sino-Australian naval relations returned to their previous state of non-existence. In 1909 the first Chinese Consul-General to Australia arrived in Melbourne but it was not until 1921 that Australia established a short lived trade commission in China.

In 1912 the Qing Dynasty of Imperial China collapsed and the Chinese Republic was declared under the leadership of Dr Sun Yat Sen. However, by 1916, the Chinese military had effectively taken control of the Government in Peking, however, throughout the country warlord generals governed their regions as they saw fit regardless of who controlled the capital. In less than 100 years the once great dynastic empire of China had fragmented into a hodgepodge of warring provinces with ever changing allegiances and ideals. Much of the blame, especially within current Chinese politics, was levelled at the western powers that opened up China to trade in the 19th century.

WORLD WAR I

During the war several RAN warships, as part of the Royal Navy's global effort to maintain the sea lines of communication throughout their Empire, operated in South East Asian waters (known as the China Station). British and Australian warships, assisted by French warships based in Indo China, patrolled to keep German merchant ships contained in neutral ports and also examined neutral merchant ships for contraband. There was concern that Germany would attempt to smuggle arms into British India to help foment revolution to divert Allied troops and resources from the main theatres of war.

The only interaction between Australian naval forces and neutral China involved the light cruiser HMAS PSYCHE during late 1916. In July 1916 warlord soldiers attacked Canton (Guangzhao) intending to declare a breakaway southern republic. The Royal Navy recommissioned the gunboat HMS MOORHEN at Hong Kong; using crew from PSYCHE, and dispatched her to evacuate Europeans from Canton. MOORHEN proceeded up the Pearl River (Zhu Jiang) experiencing sporadic rifle fire on the way and one Australian sailor was slightly wounded. En-route the gunboat met with a steamer carrying the bulk of European

evacuees and escorted them back to Hong Kong. MOORHEN was then decommissioned.

Throughout August - October, PSYCHE patrolled the approaches to Amoy (Xiamen) checking vessels for contraband and twice stopped and boarded Chinese vessels on the high seas. On one occasion PSYCHE'S boarding party seized a German citizen and confiscated two bags of mail. The neutral Chinese government protested to the Australian government regarding this but as the events had occurred outside Chinese territorial waters (then only three nautical miles) the boarding's were deemed legitimate. PSYCHE departed Chinese waters in mid-October 1916 thus ending RAN involvement in Chinese waters.

THE INTER WAR PERIOD

During the 1920s several rival warlords fought various small wars in northern and central China to maintain or extend their influence. The Chinese Republic remained relatively unstable throughout this period despite General Chiang Kai-shek achieving nominal unification of China, by military force, under the Kuomintang (KMT) in 1928. The Chinese Communist Party, under Mao Tse Tung, rose up to offer an alternative option of Government and so commenced the long running civil war between the KMT and Communists. Amongst this instability Imperial Japan took whatever opportunity arose to advance its interests and seized Chinese territory where it could. In 1937 the second Sino-Japanese War broke out so at least now the KMT and Communists had a common enemy.

Australian - Chinese naval interaction during 1919 - 1939 was limited to Imperial policing activities as part of the Royal Navy's duties to protect British nationals and its interests in China. In mid-1925 the cruiser HMAS BRISBANE served on exchange with the Royal Navy as part of the China Station Squadron and visited ports in South East Asia, Japan and China. She briefly operated at Wei Hai Wei (British leased territory on the Shantung Peninsula) before proceeding to Hong Kong to maintain civil order; when a series of strikes affected government services. BRISBANE'S crew also manned the power station and operated ferries and trams.



Figure 3 HMAS BRISBANE serving with the RN China Station - Photo RAN Historical.

The Royal Navy also operated gunboats on the Yangtze River to protect British interests and the suppression of bandits and ill-disciplined warlord armies. Occasionally RAN officers were loaned for duty in China and commanded British gunboats. Commander Harry Howden commanded HMS MANTIS during 1930-32 and Lieutenant Commander George Stewart commanded HMS ROBIN in 1936-38.

WORLD WAR II

Following the outbreak of war the RAN was again deployed to the China Station to support British interests. The former merchant vessels Arawa, Kanimbla and Moreton Bay were commissioned in the RN but manned by RAN personnel and dispatched to Hong Kong. From here they patrolled the Chinese and Japanese coasts checking merchant ships for German citizens and war materiel.

In mid-1940 the three ships were re-allocated to other war stations and the RAN ceased to be involved in operations off China until the British Pacific Fleet commenced offensive operations in the area around Formosa (Taiwan) in 1945. Australia established its first diplomatic mission at Chungking in 1941. The Legation was moved to Nanking in 1946 and upgraded to an embassy in 1948.

THE POST WAR PERIOD

RAN units returned to the Chinese coast in late 1945 as part of the British liberation of Hong Kong. Duties included minesweeping, removal of Japanese troops and repatriation of Allied POWs. While one war had finished another recommenced with vigour as KMT and Communist forces again turned on each other. By 1949 the Nationalist forces were clearly losing this civil war. Although neutral, the British Government maintained naval forces at Hong Kong and Shanghai to protect British interests.

Australian warships also operated in the region and in January 1949 HMAS WARRAMUNGA, then on duties with the British Commonwealth Occupation Force in Japan, was on standby for the evacuation of British citizens from Nanking. While operating off the Yangtze, on 28 January, she rescued 35 survivors after a collision between two Chinese ships. For their actions WARRAMUNGA'S crew was congratulated by the Nationalist Chinese authorities.

On 21 January 1949 the frigate HMAS SHOALHAVEN sailed for the Far East where she conducted exercises with ships of the Royal Navy and United States Navy. After a visit to Hong Kong she proceeded to Shanghai, where she was based from 17 to 28 February and 24 March - 25 April. During this period she was associated briefly with HMS AMETHYST of Yangtze River Incident fame.

This incident occurred when the RN attempted to relieve its guardship (HMS CONSORT) at Nanking where the British Embassy was located. SHOALHAVEN was to undertake this task but the Australian Government declined to approve this so the frigate AMETHYST was dispatched. En-route to Nanking land forces of the Communist Peoples Liberation Army (PLA) opened fire with artillery and disabled the frigate which ran aground. Attempts to rescue AMETHYST failed. SHOALHAVEN did not take part in this activity although her Medical Officer, Surgeon Lieutenant Newton Chalk, RAN served in the cruiser HMS LONDON; which was hit 34 times and suffered over 90 casualties in the failed rescue attempt. AMETHYST made a dramatic escape and re-joined the fleet in late July 1949.

By mid-1950 the Chinese Civil War had come to an end with the PLA triumphant although it failed to capture the island of Taiwan where Chiang Kai Shek and his followers had fled. Australia's diplomatic mission closed in 1949 when Nationalist Chinese forces were expelled from mainland China.



Figure 4 HMAS WARRAMUNGA (I44) off New Guinea 1944.

THE KOREAN WAR AND AFTER

In June 1950 Communist North Korea invaded the nominally democratic and US backed South Korea and the United Nations was quickly drawn into the conflict. RAN forces joined the fight and the next three years saw UN naval forces quickly and constantly maintain sea control in Korean waters. North Korean naval forces were immediately placed on the defensive and resorted to sea denial tactics especially the use of mines. The People's Republic of China (PRC) supported North Korea with personnel and equipment in the fighting on land and in the air but its maritime forces were no match for the UN coalition and were not deployed.

Chinese Premier Mao Tse-Tung later wrote after the Korean War:

The important reason that we cannot win decisive victory in Korea is our lack of naval strength. Without naval support, we have to confine our operations to frontal attacks along a line limited by sea. Such actions always entail great losses and we are seldom capable of destroying the enemy. In March 1951, I suggested to Comrade Stalin to make use of Soviet submarines in Asia under some arrangement that the Soviet Union would not be apparently involved in the war. Comrade Stalin preferred to be cautious lest it might give the capitalist imperialism the pretext of expanding the war to the Continent. I agreed with his point of view. Until we are better equipped for victory, it is to our advantage to accept agreeable terms for an armistice.

This lack of maritime capability was for decades the Achilles heel of Chinese grand strategy and one that recent events has shown they may be keen to correct.

Throughout the 1950s and 1960s the Australian Government continued to support allies and friends in confronting the rise of Communism throughout South East Asia. While there was no direct confrontation between the RAN and PLA Naval forces the Malayan Emergency (1948-60) and Vietnam War (1965-73) were at the time considered proxy wars which had to be fought to prevent the spread of Chinese supported communism. While recent history has shown this to be incorrect the leadership of the RAN at the time considered the Chinese threat seriously and many junior personnel were told to expect to die fighting the Chinese.

The creation of the Far East Strategic Reserve (FESR), ANZUK forces and the Five Power Defence Agreement (1971), were focused on preventing a communist take-over of Malaysia and Singapore. The stationing of Australian and New Zealand forces in Malaysia and Singapore, well into the late 1980s, was focused on potential Chinese aggression (and later Soviet expansion following the invasion

of Afghanistan in 1979). Deployments by RAN vessels to the region were also numerous and frequent.

From 1949 Australia refused to recognise Nationalist China (Taiwan) but this changed in 1966 when a Diplomatic Mission opened. Between 1967 and 1971 Australian destroyers, deployed to Vietnam on the 'Gunline', also visited the ports of Keelung and Kaohsiung for rest and recreation and to show the flag. This of course all ended in late 1972 when the Whitlam Government, following the US lead, recognised the PRC as the rightful China. The embassy in Taipei was closed and another opened in Beijing.

BEYOND 1972

Defence relations between Australia and China were slow to materialise but in the late 1970s a Defence Advisors position was established in the embassy and so began the process of establishing defence ties with a former 'adversary'. The RAN was best placed of the three services to undertake the initial diplomatic activities and in September 1981 the destroyer escort HMAS SWAN conducted the first port visit to China when she visited Shanghai as part of a deployment to Asia. In September 1984 the destroyer tender HMAS STALWART and destroyer escorts HMA Ships YARRA and STUART also visited Shanghai.

In 1985 another RAN vessel arrived in China under different circumstances. The decommissioned aircraft carrier, ex HMAS MELBOURNE, arrived at Guangzhou (Canton) for scrapping. Much of the carrier was de-militarised, however her steam catapult, arresting gear and mirror landing system were still in place and were closely examined by the PLA Navy; prior to MELBOURNE'S eventual scrapping. At this time few considered the Chinese would develop aircraft carriers but time has proven otherwise. In hindsight the scrapping of MELBOURNE in China hastened the PLAN gaining this capability.

In 1989, following the Tiananmen Square incident, Australia placed an arms embargo on China and ship visits ceased. The embargo ceased in 1992 but ship visits did not recommence until September 1997 when HMA Ships SUCCESS, PERTH and NEWCASTLE visited Qingdao (Tsingtao). In 1998 the first reciprocal visit to Australia took place when the destroyer QINGDAO, training ship SHICHANG and tanker NANCANG conducted a four day visit to Sydney.

Since then RAN warships have visited several Chinese ports with the most recent being the frigates ARUNTA and STUART to the port of Zhanjiang during late 2015. Some controversy arose when the media advised the ships would exercise with the PLAN which included live firing activities (even though this previously occurred in 2010 when WARRAMUNGA undertook similar exercises). PLAN warships also continued to visit Australia with the most recent visit being in 2013 during the International Fleet Review. China also regularly deploys warships to the Middle East Area of operations and in 2015 sent three vessels to the Mediterranean to operate with the Russian Navy. Additionally PLAN ships have travelled as far afield as South Africa and Brazil.

Leading on from the port visits an annual Australia – China Strategic Dialogue commenced in 1999. This led to increased interaction between the ADF and the PLA with low level exercises such as Exercise Cooperation Spirit 2011 (Humanitarian and Disaster Relief) and Exercise Kowari (Special Forces bush survival). In 2014, following the disappearance of Flight MH370 in the Indian Ocean, PLAN



Figure 5 HMAS SWAN III (DE 50) Arriving in Shanghai 3 September 1981 the first by an RAN Ship visit in 32 years.

warships deployed to the Indian Ocean to assist with the search and a liaison officer was embarked in HMAS SUCCESS. Defence exchanges have continued including training in military law, maritime security, joint warfare, maritime air surveillance, emergency management and peacekeeping.

THE FUTURE

Australia's maritime relationship with the PRC is currently the best it has ever been, but the level of tension between the two nations is also high. China remains the key player in the four main regional 'flash points': the Korean Peninsula; East China Sea island disputes with Japan; the future of Taiwan; and the South China Sea territorial claims. In all cases the PRC holds views which do not correspond with Australia or its friends and allies.

Australia maintains very strong military and diplomatic ties with the United States, which is unlikely to change, and the military relationship with Japan and several South East Asian nations continues to increase. Some see Australia, as a major trading partner of China and a key US ally, being in a prime position to negotiate more effectively with China particularly over the South China Sea freedom of navigation issues and seizure of reefs and islets which have been converted into military bases.

Despite the UN Convention on the Law of the Sea (UNCLOS), and the rights of innocent passage detailed in it, the PRC claims that warships intending to sail through portions of the South China Sea (and Taiwan Strait) require prior approval from China. Australia has consistently supported UNCLOS and its freedom of navigation rights for warships as part of the rules based global order.

The PRC now possesses the naval strength that Mao stated it previously lacked and has repeatedly proven it has the ability to deploy long distances and sustain its forces for either 'good' or 'bad'. There is concern that China has been playing the 'long game' and now has the ability to right many of the perceived wrongs it claims have been committed against it in the past.

Despite some fluctuations the Chinese economy continues to grow and so will its imports, particularly oil, coal, iron ore and foodstuffs. This is important to Australia because of the large amount of our trade that flows to and from China, almost all of which travels by sea. This increased level of economic inter-dependence is likely to continue, reinforcing the need to share in protecting vital trade routes to ensure future economic prosperity for both nations.

The rise of China is a reality and at the same time the US may not

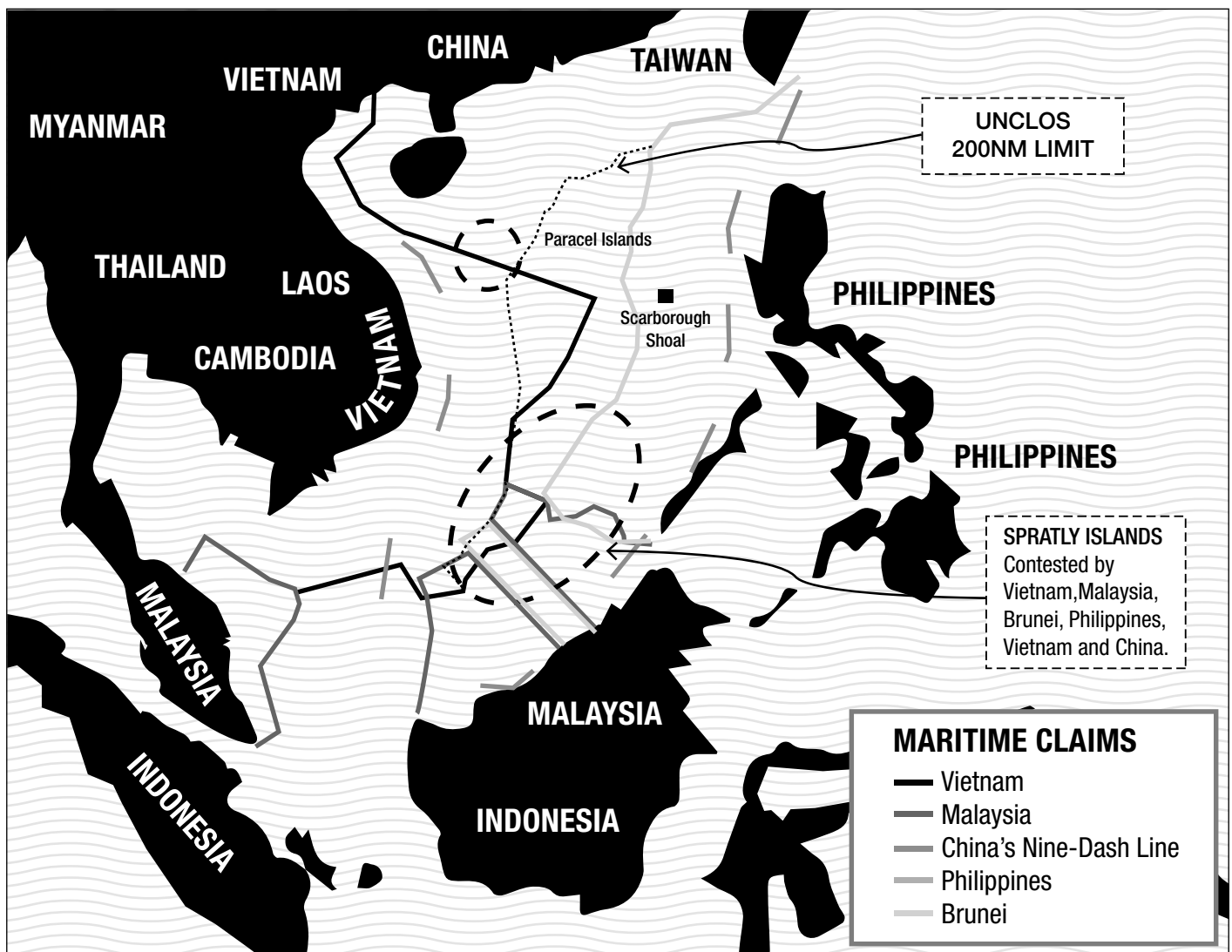


Figure 6 South China Sea Claims - after Wall Street Journal July 2016.

actually be declining as some commentators believe. This is the potential threat to stability in the Indo – Pacific region due mainly to the large degree of influence that China can exude (soft power) or enforce (hard power) and the PRC has shown it is happy to use both the carrot and the stick in dealing with other countries; to the point that recent interactions in the South China Sea have been nothing short of bullying smaller nations. This continues to exacerbate the naval arms race in the region as many countries increase their naval inventory in the face of perceived (or actual) threats from China.

Some commentators have stated that a 're-emerged China', assuming a more prominent and decisive place in world affairs, should be welcomed; its full acceptance into the international system being an essential stepping stone to greater cooperation, trust and transparency. However, China is treading a fine line between diplomacy and militarism and not always getting it right. If the UN tribunal declares the Chinese creation of airstrips and bases on reefs, in the South China Sea, as illegal will China politely obey the rule of law and dismantle them?

The four 'flashpoints' previously detailed remain and a veiled warning, from one Chinese official, stated Australia should not be led astray and follow the US (Global Tiger) or Japan (Asia's Wolf) into any military conflict with China. His recommendation that instead Australia should play the role of a 'kind-hearted lamb' met with scorn and derision.

Australia and its defence force (particularly the Navy) now stand at a T-intersection in the nation's history. One path leads to continued prosperity throughout the Indo-Pacific region as pressure is brought upon China to continue its 'rise' in an acceptable manner and avoid friction with its neighbours; particularly the US. The other path is not quite so pleasant particularly if China continues to play a dangerous game of brinkmanship with the US and its friends and her allies. Time will tell what the future of the Sino – Australian naval relationships will be. Some commentators believe sanity will prevail in the South China Sea but I don't share their level of optimism. ■

FOOTNOTE

Mao's quote can be found on page 8 of *Out in the Cold - Australian's Involvement in the Korean War 1950-53* (Published by the Department of Veterans Affairs, Canberra, 2001).

CREATING THE 21ST CENTURY NAVY

By John Jeremy

The 2016 Defence White Paper and subsequent decisions announced by the Government before the recent election have set a course for the development of the Royal Australian Navy over the coming decades which will create a force of considerable capability. However, the world in which we live is undergoing rapid change. The strategic situation we face now presents challenges which may require rapid response — response in time scales which could be shorter than we may expect. Technology, also, is advancing at a great pace. The threats which our future ships and submarines may have to counter could change radically in the next decade or two. This paper examines the challenges facing Australian Industrial Maritime Strategy in the 21st Century to shipbuilding, basing and support and posits some potential solutions.

INTRODUCTION

The 2016 Defence White Paper emphasised vast area over which Australia has a strategic interest. Our maritime exclusive economic zone is one of the largest in the world with a total area of around 10 million square kilometres. We are also responsible for one of the largest search-and-rescue zones in the world, around some 53 million square kilometres of the Indian, Pacific and Southern Oceans. In addition, our trade traverses some of the busiest and most contested waters in the world, as shown in this chart which is in the White Paper.

In 2007 the Australian Government ordered five major new ships for the RAN which are now beginning to transform the RAN and the ADF as a whole. The LHDs HMAS CANBERRA and HMAS ADELAIDE were commissioned in

November 2014 and December 2015. The largest ships the RAN has ever operated, they are starting to demonstrate their capability — HMAS *Canberra* was deployed to Fiji in March this year to support recovery efforts from the cyclone which had devastated part of the country and, more recently, took part in RIMPAC 2016 operating with more than 40 ships and submarines from 26 nations. During this multinational exercise CANBERRA demonstrated the capability of operating with the ships and aircraft of the United States and achieved a first for the class, the docking of a US Navy air-cushion landing craft (LCAC).

The construction of three new guided missile destroyers, HOBART, BRISBANE and SYDNEY, has been delayed by problems not least arising from the difficulties associated with restarting dormant naval shipbuilding capability and the challenges of adapting a ship design from another



Figure 1 HMAS ADELAIDE (L01) Operating Chinook CH 47 and MRH-90 Taipan Helicopters - Photo RAN.

Figure 2 SPS CANTABRIA (A15) Operating with HMAS SUCCESS (OR 304).



country with a different language and shipbuilding culture, problems which would be familiar to anyone who has had experience of such a project. The first ship, HOBART, was laid down on 6 September 2012 and launched on 23 May 2015. She is now nearly completed with contractor's sea trials this month and hand over to the RAN expected in mid-2017.

REPLENISHMENT AND SEA BASING

On 6 May the Government announced that contracts had been signed with Navantia for the construction and support of two replenishment ships for the RAN, to replace HMAS SUCCESS and HMAS SIRIUS. The \$640 million construction contract includes \$130 million for Australian industry for work which will include combat and communications systems integration, integrated logistic support and elements of the on-board cranes. An initial, five year, sustainment contract was also signed with Navantia — work which will be undertaken in Australia.

The decision to build these two ships overseas is a pragmatic one — we no longer have shipbuilding facilities capable of building ships of this size, and the time and cost to expand existing facilities (most practicable in Western Australia) would have delayed the delivery of the ships beyond the 2022 delivery of the first ship and overlapped other planned programs.

The ships will be based on the Spanish Navy's CANTABRIA which spent 10 months serving with the RAN in 2013 while SUCCESS was in refit. This 19,500 ton ship is 170.4 m long and can carry diesel fuel, avcat, Fresh water, ammunition and general cargo — a capability similar to that of SUCCESS. Propelled by a single screw driven by two diesels she has a speed of about 20 knots and can carry a couple of helicopters. In Spanish service the ship has a complement of 122, substantially less than SUCCESS. The new ships will have extensive commonality of equipment and systems with the LHDs CANBERRA and ADELAIDE and the guided missile destroyers.

BENEATH THE SEAS

Shortly before this contract announcement, on 26 April, the Government announced the long-awaited selection of the submarine design to

succeed the present Collins-class submarines.

Following a competitive evaluation process involving TKMS of Germany, the Government of Japan and DCNS of France the Government has selected the Shortfin Barracuda Block 1A design offered by DCNS of France. Whilst I expect that each of the contenders would have produced a very fine submarine, the Government decided that the French bid best met the unique capability requirements of the RAN. These included superior sensor performance and stealth characteristics together with range and endurance similar to that of the Collins-class submarines.

The submarine will be a development of the design of the new French nuclear submarines of the Barracuda class. This program began in October 1998 with the first submarine laid down in 2007 for completion next year. A further five submarines are planned to be completed at two to three year intervals with the last entering

service around 2029. Whilst our submarines will be based on these boats, modifying the design from nuclear propulsion to diesel electric is not a trivial task. The change will affect most of the submarine, making the Australian version virtually a new design. The change to combat system and weapons will also have a significant impact on the design.

The Australian program envisages twelve submarines for the RAN, all to be built in Adelaide. Of course, they won't all happen at once, the construction program is likely to be spread over about 20 years, with one submarine being delivered every 18 months or so. Some might suggest that this pace, or 'drum beat' as it is sometimes called, is too slow. Speeding it up would place extraordinary demands on industry over a short period and on the Navy to manage acceptance into service and to provide crews for the submarines. It could be argued that one new submarine every two years would be more practicable, particularly as the 'drum beat' has implications for the subsequent support of the submarines and their availability to the fleet.

The Collins-class Submarine Sustainment Study of 2012, led by John Coles, recommended a different sustainment approach to that originally adopted for the Collins class. The cycle that Coles and his team

Figure 3 Future Submarine based on Shortfin Barracuda - Image DCNS.



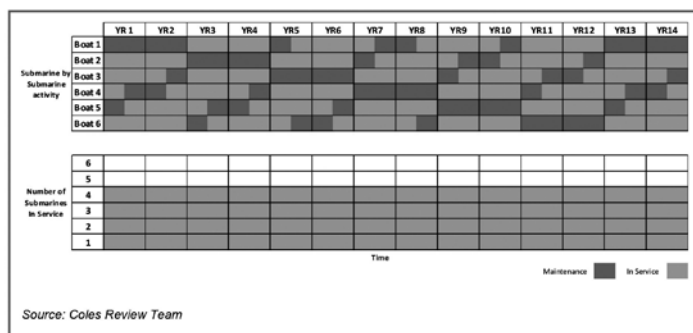


Figure 4 Collins Class Cole's User Upkeep Cycle (UUC).

recommended is shown in Figure 4, and it is this cycle which is now being adopted. It envisages two-year FCDs, planned end-to-end, with a ten year operational period which includes a 12 month MCD and two six-month IDs. The availability of submarines is greatly improved, with the fleet being assured of four submarines at all times, of which one would be in work-up or training. The load on the refit yard, in this case ASC, is much more difficult to manage. The demand for skills during a FCD varies during the refit period and normally overlapping refits make that manageable. HMAS FARNCOMB completed the first two-year FCD this year. COLLINS, which follows, arrived at the yard early, enabling work to be begun on her in advance of the planned start date which eased the labour loading challenge at ASC and reduced inefficiencies created by the UUC. The MCDs and IDs might be expected to help, but they are being conducted in Western Australia while the refits are in Adelaide.

If the present cycle is adhered to, ASC could expect to complete five more FCDs (up until about 2026). FARNCOMB will complete her operational period in 2026, and the last boat would reach end-of service in 2036, by which time we may have only two or three of the Shortfin Barracuda-class submarines in service, assuming that this project is no longer delayed. This is similar to the situation which occurred when the construction of the Collins-class submarines was delayed and the refit schedule of the Oberon-class submarines disrupted by the Government decision to close Cockatoo Dockyard before all the planned refits of those boats were completed. To prevent this situation arising again life-extension refits of at least some of the Collins-class submarines will be required.

ON THE SEAS - FRIGATES

In addition to the decision on submarines, the Government recently announced the short-listing of designs for the future frigate project (SEA 5000) and the Offshore Patrol Boat Project (SEA 1180).

Nine future frigates are planned, to replace the present eight Anzac-class frigates. It is intended that they will be optimised for anti-submarine warfare, recognising that about half the world's submarines will be operating in the Indo-Pacific region by 2035. Construction is planned to start in 2020, also in South Australia. It is expected that the ships will be substantially larger than the Anzacs and capable of operating throughout South East Asia and elsewhere.

The Anzac-class frigates have served us well and will be further improved under a Life-of-type Assurance Programme (LOTAP) at Henderson in Western Australia which will include improvements to ship systems. HMAS *Perth* the first ship to complete the ASMD Upgrade, will be the first frigate to begin this programme.

As the first step in selecting a design for the future frigate, the Government has selected a short list of three — the British Type 26 frigate offered by BAE Systems, the Italian FREMM frigate from Fincantieri and a redesigned Spanish F100 from Navantia. Contracts have just been signed with all three companies to further refine their designs as part of a competitive evaluation process which is expected to take about a year.

The Type 26 frigate, or Global Combat Ship as it is also known, was developed as a result of a future combat ship development programme begun for the Royal Navy nearly 20 years ago, in 1998. The ship was then intended to replace the RN Type 22 and Type 23 frigates. In 2010 BAE Systems was contracted to design the new class of warship, the Global Combat Ship. It was then expected that the first ship would be in service by 2021. Various options were developed, but by 2015 the design had stabilised into a 6,900 t ship and BAE Systems was given a further order in 2015 to progress the design and to order long-lead time equipment for the first ships. The plan then was to replace the Type 23 frigates on a one-for-one basis with the first ship to be completed around 2023, however the Strategic Defence and Security Review of November 2015 reduced the planned number of ships to eight with the money saved to be spent on a new class of smaller and simpler frigate, now known as the Type 31.



Figure 5 NUSHIP (HMAS) HOBART (D39) alongside HMAS FARNCOMB (SSG 74) at ASC Yard Adelaide.

In July this year it was reported that the Type 26 will be further delayed, largely due to funding constraints. Construction is now expected to begin in 2017. The Type 26 is a 149.9 m long ship which can be adapted for various roles with modular payloads, but particularly effective as an anti-submarine warship. The planned complement is 118, with accommodation for 208. The design is believed to be readily adaptable to accommodate Australian requirements, including the latest version of the CEAFAAR phased-array radar.

The Italian FREMM frigate, offered by Fincantieri, is a multi-purpose frigate designed by DCNS/Amaris and Fincantieri for the French and Italian Navies. The ship has a displacement of about 6,900 t and a length of 144.6 m. Like the Type 26, the propulsion system is combined diesel electric/gas turbine.

Ten ships are planned for the Italian Navy, four of an anti-submarine version and six general purpose ships. The first of the general purpose variant was completed in May 2013. In addition to France, FREMM frigates are also operated by Morocco and Egypt.

The third contender for the future frigate is a modified version of the F100 design offered by Navantia. Navantia has indicated that this ship would have a high degree of system commonality with the present Navantia designs delivered or under construction for the RAN — 75% with the destroyers and 30% with the LHDs. The frigate would have a displacement of about 6,400 tons and an overall length of about 147 m. The latest Navantia frigate design for the Spanish Navy, the F110, has provision for modular payloads and it might be expected that the Australian ship will also.

All the three contenders are large ships. In the past we have often made the mistake of assuming big is bad. Air is free and steel is cheap — remember that the hull represents only about 25% of the cost of a modern combat ship. The payload, the combat system and weapons, are a much larger cost and far more flexibility and adaptability is achieved by putting that payload in a ship with generous margins of space, mass and power for future growth.

The government intends that the new frigates will also be built in Adelaide and for construction to start in 2020. It is unclear at this stage how this will be arranged — the potential role of ASC Shipbuilding is uncertain and it is possible that each of the contenders may prefer to take a prime contractor role for the project which is long-term and will also include a support element.

ON THE SEAS - OPVS

The third new-construction project recently announced by the Government is for the construction of twelve offshore patrol vessels (OPV) to replace the Armidale-class patrol boats, Project SEA 1180. They are expected to be 'around 70-80 m in length and will be able to embark unmanned aerial, underwater and surface vehicles and operate larger sea boats than the existing Armidale class.' Three very capable overseas companies have been shortlisted to provide designs to meet the RAN's requirements — Damen of the Netherlands, Fassmer of Germany and Lurssen of Germany. Damen are well known in Australia. They have built six new tugs for the RAN which are now operated around Australia by DMS and recently completed two 2,500 t, 83 m submarine rescue and support ships, Stoker and Besant, which are based in Western Australia and also operated by DMS. A helicopter training ship, the 2,400 t, 91 m Sycamore is being built by Damen in Vietnam and will be based in Sydney after delivery next year. The ship is based on Damen's 2,400 t OPV design.

Damen is also the builder of Australia's new Antarctic research and supply ship which is expected to be delivered in 2020.

The second contender, Lurssen, is less well known here but Lurssen was one of the contenders for the Fremantle-class patrol boat project in

competition with Brooke Marine of the UK in the 1970s.

Fassmer is a family-owned German company which will be offering its design through TKMS Australia, which was one of the unsuccessful bidders for the new submarine project. Their OPV 80 design has been sold to the navies of Chile and Columbia, with fourteen vessels in service, under construction or planned.

All these OPVs are relatively simple ships of steel construction and built to commercial standards, as they should be. Whilst there is no compelling technical reason why they should be built in Australia, not to do so would be politically unacceptable and, in any case, they provide valuable workload to sustain capability.

In order to partly fill the gap between the Hobart-class destroyers and the start of construction of the new frigates, the Government has decided that the first two OPVs will be built in Adelaide, with construction moving to Western Australia for the remaining ten ships. Construction is intended to start, following the competitive evaluation phase and design selection, in 2018 with all the ships completed by 2030. Just how this will be managed remains unclear.

BASING

Whilst it will be some time before the number of major fleet units in the RAN increases beyond today's number, the size of the ships is already increasing. HMA Ships CANBERRA and ADELAIDE are the biggest ships the RAN has ever operated and they are backed up by another large fleet unit, HMAS CHOULES. In addition, there will continue to be a sizeable fleet replenishment ship based on east and west coasts.

Our new guided missile destroyers, HOBART, BRISBANE and SYDNEY, are considerably larger than the ships they replace and, in due course, the present Anzac-class frigates will be replaced by ships of a similar size. Within about twenty years the number of submarines in the fleet will start to increase with the likely need to base some of them, at least, on the east coast of Australia.

Figure 6 HMAS PERTH (FFH 157).



This is not simply a challenge of finding enough wharf space. Modern warships are demanding of services — high-voltage stabilised-power supplies, for example. Turning off the combat systems and other services in our new destroyers whilst in port is not an option — they need to have power at all times. If that is not available at their base then the ship's own alternators must be kept running, consuming precious running hours and distressing local residents.

Too often the provision of shore services lags the construction and delivery of the ships. The acquisition of a modern warship needs coordinated attention to base facilities, shore accommodation and training facilities. The extent and complexity of the latter is well illustrated by the training facilities set up in Sydney for the LHDs and DDGs. Making extensive use of simulation, these facilities can train ship's companies in the operation and fighting of their ships, even in concert with the ships themselves, without leaving the wharf.

It is quite clear that the existing fleet bases will be stretched to the limit by the 21st century RAN. The Defence White Paper anticipates that, over the next ten years, HMAS Stirling in Western Australia will be upgraded with improved wharves and new training and support facilities. This base is fortunate in that there is room for expansion, subject to compromise with surrounding nature reserves on the island. It is also conveniently located near the ship repair facilities at Henderson, a legacy of forward-looking state government investment in past decades.

Today, the Defence precinct at Garden Island in Sydney is an indispensable national asset. The Captain Cook Dock, the second largest dock in the Southern Hemisphere, is the only dock in Australia which is capable of docking all the Navy's ships of today and tomorrow, as well as most of the commercial vessels which visit Australia. Moreover, the Garden Island facility is part of a much larger group of associated facilities: fuel supplies, training facilities at HMAS *Watson*, HMAS *Penguin*, at Randwick and at HMAS *Albatross*, training areas at sea and at Jervis Bay, only 100 nautical miles or so south of the city. Moreover most of the east coast industrial support is centred on Sydney.

If the base were to be moved, where could we put it? A home for the RAN needs to satisfy certain basic criteria.

- It needs to be where people want to live.
- It needs to be near employment opportunities for the partners of service people.
- It needs Universities and Schools for their children.
- It needs deep water, defensible access.
- It needs to be out of cyclone-prone regions.
- It needs access to maintenance and support facilities.
- It needs ready access to supporting industry.
- It needs access to fuel and other essential supplies.
- It needs ready access to an airport.

How many sites on the east coast of Australia meet these criteria? Not many — suitable defence land in Port Stephens, originally reserved for a major naval base, was sold off in the 1920s. Plans for a base in Jervis Bay were abandoned in the 1980s and the area is now extensively national park and marine reserve. Newcastle has no space which is not devoted to essential commercial business, as is case in Port Kembla.

Two options remain, only one of which meets, to a degree, the criteria I have set out. Eden on the south coast of NSW is already the site of the RAN's ammunition storage facilities, but the location is remote from industry and those other attributes which would make it a good base. The cost of creating a base there would be substantial. Brisbane is a better option, for part of the need, at least. The Defence Force Posture Review of 2012 identified Brisbane as the most promising location, in the long term, for a new fleet base on the east coast. It also has the advantage of being a nuclear-powered warship approved port.

A disadvantage of Brisbane is that the potential location is a new island reclaimed from Moreton Bay joined by a causeway to the existing Port of Brisbane facilities. It is exposed, and the access to the site from the sea is tortuous (as it is now) and, I would have thought, vulnerable to mining. Nevertheless, it would seem to make sense to reserve the space and begin planning now for a supplementary east coast base there so that it may be ready, at least in part, by the mid-2030s.



Figure 7 Cunard Flagship SS QUEEN MARY docking in Garden Island (Fleet Base East).

Meanwhile, existing bases in the north of Australia, for example in Darwin, are to be expanded to manage the larger ships which are to be based there in future.

SUPPORT

We no longer have naval dockyards in the form which we had for four decades after World War II. For many years after the war we maintained a steady naval shipbuilding program and conducted most of the maintenance, refit and modernisation of the Navy's ships within dockyards operated by, or owned by, the RAN. This practice built up a reservoir of skills in the dockyards and at Navy Office which could do almost anything. It was, however, an expensive and sometimes inefficient use of resources and, as half the Navy moved west and modern ships required less intensive maintenance, things began to change.

An attitude also developed that the maintenance of the Navy's ships was not particularly specialised and money could be saved by placing the work in the commercial sector following competition. This led to an inevitable decline in the reservoir of skills within the Navy and its associated dockyards. The closure of Cockatoo Dockyard in the early 1990s and the privatisation of the operation of the Garden Island Naval Dockyard contributed to that process.

We are now attempting to reverse this trend by establishing long term relationships with selected contractors for particular classes of ships. I expect that this process will continue, and the new acquisition projects are including support contracts which will help retain the knowledge and skills established during construction to the benefit of the fleet.

There remains more to do. With extensive outsourcing of technical work, the navy's in-house resources have declined, particularly as older people with long experience retire. They need to be replaced if the navy is to be able to be an informed customer during a period of great expansion. Unfortunately that cannot be achieved overnight.

SHIP NOT PLATFORM

The RAN has suffered for some time from insufficient attention to the maintenance of its ships — operations have taken priority and maintenance has been deferred. This has particularly affected the surface ships — submarines are subject to strict rules more akin to aircraft and it a bold person who seeks to shortcut those rules. Efforts are now being made to redress this situation.

I blame it, in part, on the growing attitude that regards the non-combat system elements of the warship as being some kind of lesser support service — an attitude not restricted to Australia. In my view the word 'platform' should be struck from the lexicon. Is a ship a platform? No, a ship is an integrated weapons system which fails completely if it is no longer able to float and move. My view is shared by many others in the warship world, and I quote these 1992 words by David Andrews, then the Head of the Warship Concept Design Group of the UK Ministry of Defence: It is common but incorrect to designate the warship as a 'platform' delivering a weapons system, since:

- a) 'Platform' implies a militarily passive delivery system which is an adjunct to a single weapon system. Rather the warship encompasses an integrated multi-warfare combat system which exists solely because of its physical cohesion on the warship.
- b) The warship is a total military entity with its own delivery 'platforms' (e.g. helicopters) and an infrastructure providing extended power, mobility and personnel, and material support within an environmentally protected shelter.

If everyone were to understand that, instinctively, the outcome would be of great benefit to the Fleet.

FUTURE CHALLENGES

The plans for the future RAN and its supporting industry which are set out in the Defence White Paper obviously make one important assumption. Simply, that we are unlikely to be engaged in a major conflict, revolution, economic depression or something else we don't want and that the pattern of acquisition, service and support will proceed without disruption so that, by the end of their lives, our assets will have achieved the ultimate success of never having fired a shot in anger.

Life is rarely so ordered, but that does not excuse failing to make proper plans because we fear it may not be possible to adhere to them. Adaptability is essential, and that can be achieved with a professional navy and a strong, responsive supporting industry. It is easy to forget how essential the latter is. It is many years now since we have had to react very quickly to provide ships with capabilities for an emergency which has arisen at short notice. The example of which I am thinking is the First Gulf War.

Recent developments in the South China Sea, an area of strategic interest to Australia, show that the world we live in could change dramatically at short notice. A capability we plan to acquire ten years from now may be of little help.

Technology is also driving rapid change. We are becoming used to unmanned aircraft and autonomous undersea robots. Soon we will see unmanned ships. Rolls Royce recently announced that it is to lead a new 6.6 million project which could pave the way for autonomous ships. The Advanced Autonomous Waterborne Applications Initiative, funded by the Finnish Funding Agency for Technology and Innovation will bring together universities, ship designers, equipment manufacturers and classification societies to explore those factors which need to be addressed to make autonomous or remote-controlled ships a reality.

Boeing has recently constructed a 15.5 m long autonomous underwater vehicle, Echo Voyager, which has a range of 7,000 n miles and a diving depth of over 3,000 m. Its batteries are sufficient for several days' operation but it does not need an attendant ship for a recharge. It approaches the surface and snorts to recharge its batteries itself, like any conventional submarine. Vehicles like this are being designed with commercial applications in mind, like inspecting underwater structures, surveying the sea floor or helping with oil and gas exploration. It does not take much imagination, however, to think of possible military applications. One of these would make an inexpensive submarine to keep watch on an adversary's port approaches, for example.

The US Advanced Research Projects Agency has recently launched a 140 t prototype anti-submarine warfare continuous trail unmanned vessel (ACTUV). The 40 m Sea Hunter, an unmanned autonomous trimaran, started sea trials this year. Its primary mission is to track submarines in shallow waters, operating autonomously at sea for 60 to 90 days. It is intended to be unarmed and to direct other assets to a detected target. One great advantage of craft like this is economy. They are expected to cost \$15,000 to \$20,000 per day to operate compared to \$700,000 per day for a destroyer.

Obviously autonomous assets like these are very vulnerable, but they are cheap. Moreover the technology is advancing rapidly. Not only will the RAN need to combat such craft in the future but it may well find them an essential element of the future navy.

With an ambitious program of development and an increasingly uncertain world, the RAN faces a challenging future. ■



ROYAL NEW ZEALAND NAVY 75 OPERATION NEPTUNE 17-22 NOV 2016

It is to the lasting credit of, in particular Captain Andrew Watts ONZM, RNZN, that the 75th anniversary of the RNZN was commemorated at all. Twixt natural disaster and contrarian events, including: opposition by politicians; lack of promotion and media awareness; earthquake; and, weather, the anniversary was duly marked and celebrated.

The anniversary week began with the Kaikoura earthquake and, for moments afterwards, it would appear that the prevailing political mood was to cancel altogether. However cooler heads and Navy-sense prevailed. This was assisted significantly by the immediate re-tasking of HMNZS CANTERBURY (L421), HMCS VANCOUVER (FFH 331), USS SAMPSON (DDG 102) and HMAS DARWIN (DDG 04) along with P8 aircraft to provide Humanitarian Aid and Disaster Relief (HADR). Given the disruption ashore, it took almost a week for the Army to get through due to damaged roads. The immediate HADR provided by the allied Navies – truly hands across the Ocean – was in the finest tradition of all four Navies. Noting all the ships were to have played hi-profile roles at RNZN 75, it was also of significance that three of the four Navies were able still to participate in the International Fleet Review – USS WILLIAM P. LAWRENCE (DDG 110: an Arleigh Burke-class guided missile destroyer) for the USN and HMAS DECHAINEAUX (SSG 76) – albeit alongside in Devonport, where its sail could be seen proudly flying high. Sadly the Royal Canadian Navy was not directly represented by a ship at the IFR but they were very much there in thought and spirit during the whole event.

In place of HMAS DARWIN, the Chilean Navy Sail Training Ship BACH ESMERALDA (BE-43) stole pride of place behind HMNZS TE MANA in a significant gathering of Pacific (and Atlantic) Navies, including: PLAN (CNS) YAN CHENG; ROKS CHUNGBUK; INS SUMITRA; JDS TAKANAMI; RSS RESOLUTION; KRI BANDA ACEH; CIPPB TE KUKUPA; VOA E PANGAI; and, SPB NAFANU.

Given the right of the line and the inheritance shared by the majority of the Navies present

with the Royal Navy, its absence was particularly noticeable. The Navies actually gathered for the IFR represented a significant maritime presence and the fact that four of the Navies could 'spring into HADR at a moment's notice', expressed the best of those Fleets.

Regrettably, the politically downbeat mood adopted by the NZ Government constantly appeared to underplay the RNZN; its significant achievements and the major IFR gathering of Allied and friendly Navies. The march along Queen's Street on the 18th was cancelled at the last moment due 'to the earthquake' – apparently so as not to offend, when other New Zealanders were in distress. Understandable to a degree, but the constant marginalisation of the event, assisted by the weather, played entirely into the hands of a motley collection of greens and anti-war protesters only seeking to disrupt and deny. So effective had both the downplaying of the IFR and the whole event been, that the only thing a local paper reported the following week was that 'Waiheke had apparently said no to war' and the IFR, and that they had 'successfully stopped 350 people from entering the defence exhibition'. It is uncertain where these protesters were, since most visitors saw none of them. What they hoped to achieve was also questionable. Then again, due to the sidelining of the IFR / RNZN 75 – there was no on-line TV coverage of the Fleet Review – the job was almost done for them. Imagine the RAN's 100th with no live TV coverage. As a result most locals were unaware that the event was even on. If this was what was intended, then it largely achieved the aim. Perhaps it might have been better to be bold and celebrate something of lasting value to all the people of New Zealand (including the many Maoris who serve and have served) and the values that many still hold dear. Instead, through the underplaying of the event, the only thing another local paper had to say was that 'a 97 year old activist had joined the throng of anti-war protesters'. Perhaps these same advisers and lobbyists might like to reflect on the exact purpose of an effective Navy to prevent and deter war. Despite all, it was stirring to see the RNZN White Ensign Flying high, with the Union Flag resplendent (top upper left), as per the NZ

Flag. It is wondered if more political engagement might have been evident if the 56.73% of the population who voted to keep the NZ Flag in the Referendum and who would probably also stand proud for their Navy, had voted for a new flag. Instead the message appeared dominated by elite-minority activists who do not share these more common, vulgar (deplorable even?) values and may even detest them. Think perhaps Trump and Brexit and NZ Flag Referendum. There is a political message out there. Counterfactually, one suspects that if the NZ Flag had been changed the elites and their fellow travellers would all have been on board to 'launch the new PC NZ White Ensign'?

The IFR itself took place on a cold, wet miserable Auckland Day – just about everything the elements could have flung at the occasion had been. There were to be no gun salutes of respect, despite the fact that the Governor General, Her Excellency The Right Honourable Patsy Reddy GNZM, QSO, embarked in HMNZS OTAGO was inspecting the Fleet in her Vice Regal capacity as Governor General and Commander in Chief. Think of the RAN 100th without such marks of respect and the implied disrespect and dishonour this would bestow on visiting Navies and the RNZN itself. Think also of the hoops having to be jumped through by the organisers to enable even a modicum of naval spirit, tradition, endeavour and pride in Service to shine through. It would be nice to think that the same elites would one day be brought to account. The underwhelming and incorrect coverage of RNZN 75 was summed up by The *New Zealand Herald's* headlines after the event, on 23 Nov 2016. The paper showed a photograph of the then Prime Minister of New Zealand, John Key (just returned from APEC) apparently being escorted 'by an American Officer...to US Destroyer USS SAMPSON at Devonport Naval Base'. The 'US Naval Officer' accompanying the PM was, in fact Rear Admiral John Martin, ONZM, RNZN, Chief [of NZ] Navy. And the ship they were passing at the time was HMAS DARWIN recently returned (with USS SAMPSON) from HADR duties off South Island. Was the IFR and the RNZN 75 pulled off. Yes and No. YES if you were NZ Government and



Figure 1 HMNZS OTAGO (P148) Reviewing Ship with BACH ESMERALDA to port and RSS RESOLUTION (L208) to Starboard alongside after IFR, Image SJRA.

seemingly wanted the whole thing to go away. YES if you were an activist who wanted to show that you were still meaningful in some way – and the Media and Political elites still listened to you. NO, if you were NZ Inc. and NO, if by way of the IFR, NZ was to show its Alliance strengths and ability to deter. It was, after all, the first time USN Ships had visited New Zealand in 25 years and the PLAN was also represented. But YES, perhaps, in that the RNZN did mark the day; ships gathered and those present remembered the wonderful, brave NZ Sailors and Servicemen and women, from all walks of life and ethnicities, who withstood Hitler's onslaught in the Mediterranean and North Africa and those who fought in Korea and Vietnam (and Iraq and Afghanistan) and who maintain the Golden Thread of Navy, from King Alfred the Great, to today. 'We will remember them', even if the elite classes, media talking-heads and closet-activists may not.

SIA CONFERENCE 2016 : NUCLEAR (PROPULSION); T&E; LBTS AND RADER

A very impressive and timely conference on Australia's Future Submarine was held in Canberra, November 2016. A key theme emerging was to do with the need to reconsider nuclear propulsion for Australia's Submarines, supported by Read Admiral Peter Briggs RAN rtd. and Captain Chris Skinner RAN rtd. Peter Briggs stated 'there's a sound argument for seriously considering transitioning to nuclear propulsion. But we'll need many more people and it'll take years to grow the pool. We'd have to start with a larger conventional fleet first. Given the long manpower lead-time, the Government should direct national preparations now to gather the details necessary for a well informed decision on nuclear propulsion by 2030, with an eye on a possible in-service date of 2046. And we should anticipate paying significantly more than our current conventional submarine capability costs'. The view on nuclear propulsion has long been considered by the NLA, see page 32. Time, timing and tempo (The Three Relatives) appear key – the clock has not yet been started. A 15 year 'to entry' and 15 year 'to application (and

industrial scale nuclear power capabilities)', appears reasonable. The decision though is political, not military – and 2030 will only be realised if policy is changed in the next 18 months, which appears most unlikely. Despite previous DoD / Navy statements that early or preview T&E would not be undertaken on the Future Submarine and that no need was seen for an integrated Land Based Test Site (FSM 0) – apparently ignoring lessons learned from Collins – it appears that DoD is now actively engaged planning for both integrated programmes. Dr Keith Joiner (UNSW) presented a developed T&E plan integrated with a revised acquisition strategy, RADER (Research, Adapt, Design, Engineer, Reflect), for de-risking the FSM programme; avoiding featurism (mission creep) / rework; and, enabling early IOC / later batches potentially 'to go Nuclear'. There is much risk at the front end of the FSM programme and valuable time is already being lost pulling the essential resources together. How the front end is brought together, is as important to managing Australia's Deterrence as will be operating the submarines themselves.

CN ASKS FOR NEW SM CLASS NAME

In an amusing aside at the SIA Conference, Chief of Navy asked for consideration of a new name for Australia's Future Submarine, other than The Shortfin Barracuda (since Australia's submarine designs will be different) and suggested, humorously, the 'Shortfin Barramundi!' Well we eat all the animals on our coat of arms, so why not!! In seriousness, of course, CN was giving recognition that the FSM design will be unique and that there was a need to Australianise the process – hence the need for a new class name!

LEAKED SUBMARINE SECRETS MAY IMPACT FSM

The government's claim that the \$AUD50 billion future submarine project will not be impacted by the leak of confidential data from French submarine builder DCNS was contradicted by the architect who will build the boats. Gerard Audet, the chief naval architect of the proposed new

Australian submarine, the Shortfin Barracuda, indicated that FSM will have key systems in common with the French--designed Scorpene-class of submarines, whose details were leaked. Leaked DCNS documents were believed to have been stolen from the company by a former DCNS contractor. French prosecutors are investigating the data leak and the Indian Navy is investigating the potential damage of the leak for its Scorpene fleet, having withdrawn from future orders.

INDIA LEASES SECOND RUSSIAN AKULA CLASS SSN

The Indian Navy has announced plans to lease a second Russian nuclear-powered attack submarine (SSN) for 10 years at a cost of \$AUD2-2.6 billion.

Construction of the proposed submarine was suspended in the early 1990s following the break-up of the Soviet Union, as happened to the first Akula class submarine leased by India, INS CHAKRA.

The Indian Navy is known to be interested in the Project 885/885M Yasen class SSN, the first of class commissioned into the Russian Navy in 2014. The Indian Navy wants its engineers and technicians to be involved in their construction – in a way similar to the integrated project teams being stood up by Defence to work on the FSM in both France and Australia. For India, this is part of an \$ AUD20 Billion strategic programme to develop its own SSNs. There is potentially a difficult balance for India to strike between a Russia increasingly aligned with China on such issues as the South China Sea and China's support for Pakistan, coupled with an opening of India towards the US. The Indian-Russian SSN window-of-opportunity may be closing more rapidly than planned for.

FRENCH NAVY / DCNS WORKS ON DESIGN FOR NEW CVN AIRCRAFT CARRIER

DCNS and the French Navy are working on designs for a new CVN Class Aircraft Carrier to replace the current Flagship, FS CHARLES DE GAULLE. Although in its early stages and with a number of mountains to climb, the design would position the French Navy and its Maritime Industry as the premier European Maritime country, second only in terms of the US amongst Western Navies. The timing for its next generation Aircraft Carrier designs is correct, assuming that the current ship will de-commission in 2030.

AIRBUS AND DCNS DEVELOP VTOL UAV FOR FRENCH NAVY

Airbus and DCNS are developing a vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) to the French Navy. The partnership will see unmanned helicopters developed in response to meet the French Navy's Système de Drones Aériens de la Marine (SDAM) requirement. No performance specifications for the VSR700 are available but the Cabri G2 on which it is based is powered by a 180 hp Lycoming O-360 piston engine (derated to 145 hp); with a gross weight of 700 kg; a speed of 185 km/h; a range of 700 km; and, a ceiling height of 13,000 ft.

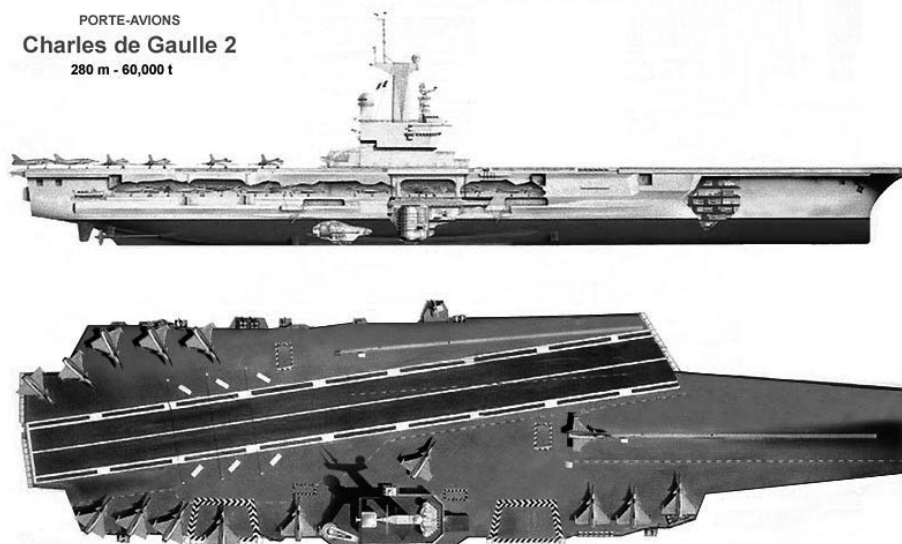


Figure 2 DCNS Schematic of French CVN Aircraft Carrier.



Figure 3 Admiral Sir Phillip Jones, First Sea Lord sans band and ships, stoops to accept the RNZN75 challenge - to send a British RN ship in 2041?

AUSTRALIA AND FRANCE STRENGTHEN GOVERNMENT RELATIONSHIP

Minister for Defence, Senator the Hon Marise Payne, and French counterpart, Minister Jean-Yves Le Drian, agreed to strengthen the Australia-France defence relationship by establishing formal annual Australia-France Defence Ministers meetings. Minister Payne stated: 'in partnership with DCNS and Lockheed Martin Australia, Australia is now positioned to design a submarine that meets our unique capability requirements. Australia and France already have a close bilateral defence relationship, which will be further strengthened through Australia's Future Submarine Program'.

In a separate meeting with Italian Minister of Defence, Roberta Pinotti, Australia's naval shipbuilding program was discussed and acknowledgement given to Italy's Fincantieri in Australia's Future Frigate program.

HMAS HOBART (DDG 39) RAN'S FIRST AEGIS DESTROYER STARTS SEA TRIALS

HMAS Hobart commenced first of class builder's sea trials in October, including incline trials; main battery alignment and the ship's propulsion system. Her main engines and gas turbines were activated on-board earlier as well as a number of key combat systems including the vertical launch system, the Australian tactical interface, the Aegis combat system and the SPY1D-V phased array radar.

Based on Navantia's F100 design, the ship is intended to provide area air defence for the Amphibious Task Group. The Aegis weapon system with the phased array radar, AN-SPY

1D(V) and the SM-2 missile provides an air defense system capable of engaging enemy aircraft and missiles at ranges out to 75nm and more.

HMAS HOBART was launched in May 2015 while ship 2, NUSHIP BRISBANE is due to be launched in December. The third and final ship of the class, NUSHIP SYDNEY, is 60% complete.

HYUNDAI BUILDS PHILIPPINE NAVY'S NEW FRIGATES

South Korean shipbuilder Hyundai Heavy Industries (HHI) gave additional details of the two frigates it is constructing for the Philippine Navy (PN). The class is smaller than previously scoped still based on South Korea's Incheon class. HHI stated that the platform will have an overall length of 107 m, a displacement of about 2600 tonnes, and an operational survivability up to Sea State 5. It will have a combined diesel and diesel (CODAD) propulsion system, with a maximum speed of 25 kts, and a range of 4,500 nm at 15 kts. A computer generated image of the class showed an eight-cell vertical launching system (VLS) installed at the forward section, just behind the primary weapon system thought to be a 76 mm naval gun.

ISRAEL SHIPYARDS WIN SAAR 72 BUILD

Israel Shipyards has won an order for the construction of the first ship of its new Saar 72 class designs, with the first ship to be delivered in March 2018. The design includes an offshore patrol vessel (OPV) variant with light armament and a corvette configuration with an offensive and defensive armament capability. The ships

can travel at speeds of more than 30 kts and can loiter efficiently at lower speeds applying hybrid propulsion variations.

GREENWICH STATION

Unable to send a ship of their own to RNZN 75 – presumably because the Type 45s are still being repaired (since their summer recall); the Type 23s are increasingly unreliable (and difficult to crew given gapping) and that the RN can no longer afford worldwide deployments – the Royal [British] Navy was represented by Sir Philip Andrew Jones KCB, ADC 'and his Band'.

RN without anti-ship / surface missiles

In an astonishing admission that the UK MoD can no longer keep its Fleet in Being, it was revealed that: Royal Navy warships will be left without anti-ship missiles and be forced to rely on naval guns because of cost-cutting, the Ministry of Defence admitted.

Naval sources reported the decision was akin to 'Nelson deciding to get rid of his cannons and go back to muskets'. Harpoon missiles are unlikely to be replaced until 2028 leaving British warships only with their 4.5in Mk 8 guns for anti-ship warfare. Helicopter-launched Sea Skua missiles are also going out of service in 2017 and the replacement Sea Venom missile to be carried by Wildcat helicopters will not arrive until late 2020. Rear Admiral Chris Parry (rtd.), said: 'It's a significant capability gap and the Government is being irresponsible. It just shows that our warships are for the shop window and not for fighting'.



Figure 4 USS RONALD REAGAN (CVN 76), steams in formation with ships from Carrier Strike Group Five (CSG 5) and the Republic of Korea Navy (ROKN) during Exercise Invincible Spirit Photo USN MC3 Nathan Burke.

Defence Secretary Sir Michael Fallon UK-French missile cooperation

In a seemingly reactive response to the announcement regarding the decade-long loss of anti-surface missiles from the RN's arsenal, and probably more by way of window dressing, sop and spin, Defence Secretary Sir Michael Fallon has announced Franco-British Centres of Excellence for missile technology with MBDA in Stevenage and Bolton. 'The UK is investing \$AUD250 billion [over 20 years] so that UK Armed Forces have the equipment they need to keep Britain safe'. The announcement on Centres of Excellence came at the annual meeting of the Franco-British Council, set up in the 1970s (when the UK joined what would become the EU) to foster closer UK-French ties. Fallon stated that the 2016 conference underlined the continuing strength and progress of the Lancaster House agreement, which is a fundamental part of Britain and France's Defence relationship.

Successor submarine named HMS DREADNOUGHT

Her Majesty The Queen has approved the first of the UK's next-generation nuclear-missile-armed submarines to carry the name Dreadnought. The name was previously held by Britain's first nuclear-powered submarine, launched by the Queen in 1960. The SSBN is being constructed alongside the four final hunter killers in the Astute class. At 152.9m (501ft) long, the new submarines will be three metres longer than the Vanguard class and displace an extra 1300 tonnes. There will be a dedicated compartment for studying, a gym, and separate quarters for female crew. Let's hope the missiles work by not having to be used...

RN shadows Russian naval force en route to Syria

The RN's ageing; reliability prone Fleet of Type 23s and Type 45s (including HMS RICHMOND and HMS DUNCAN) monitored the equally ageing but modernising Russian Aircraft Carrier Battle Group, spearheaded by the ADMIRAL KUZNETSOV aircraft carrier, as it transited the

North Sea in October. UK Defence Secretary Michael Fallon said the Russian naval deployment was aimed at 'testing' British and broader NATO capabilities and 'to test our response, and any weaknesses in the Alliance, and we must make sure we respond in due measure.' The Russians have long ago discounted the RN as playing an ongoing serious role in NATO and have exposed Britain's inability to mount a successful second strike nuclear deterrence policy through constant (successful) probing of UK's inadequate Maritime Defences. Russia's role in London, in Brexit and in the Scottish Referendum has not been fully investigated – and is aimed at further dividing the UK and weakening the country, NATO and the US-UK 'special' relationship. The UK is now exactly where Putin would wish it to be – and has been planning for. The RN is simply an expression of that position – 'no RN = no UK'.

USS ZUMWALT, BREAKS DOWN IN PANAMA CANAL

USS ZUMWALT (DDG 1000), built at a cost of more than \$US4.4 billion, broke down in the Panama Canal. US Third Fleet spokesman, Commander. Ryan Perry reported the USS ZUMWALT was to remain at ex-Naval Station Rodman in Panama to address the issues.

USN AWARDS BAE SYSTEMS \$AUD250 MILLION CONTRACT FOR DDG 1000 CLASS

BAE Systems has received an 'indefinite delivery / indefinite quantity contract' from the USN for post-construction work aboard the guided missile destroyers USS ZUMWALT and USS MICHAEL MONSOOR (DDG 1001), at BAE Systems San Diego Ship Repair.

In addition, BAE Systems' Weapon Systems business will work on the ships new gun systems and install the ships' Mk 57 vertical launch systems.

CSG 5 RETURNS TO YOKOSUKA

The USN's only forward-deployed aircraft carrier, USS RONALD REAGAN (CVN 76), returned to Yokosuka, Japan at the end of November following a three month patrol of the Indo-Asia-Pacific Region. CSG comprised: USS RONALD REAGAN (CVN 76), Carrier Air Wing Five (CVW 5), the Ticonderoga-class guided-missile cruisers USS CHANCELLORSVILLE (CG 62) and USS SHILOH (CG-67), Destroyer Squadron Fifteen (DESRON 15), the Arleigh Burke-class guided-missile destroyers USS BARRY (DDG 54), USS CURTIS WILBUR (DDG 54) and USS MCCAMPBELL (DDG 85)

AUSTAL CEO: WE DO IT DIFFERENTLY

AUSTAL has an order book of over \$AUD43 Billion, and is the only Australian company to make it into the top 100 global defence companies. According to the CEO David Singleton this is due to specialization, particularly in 'all aluminum vessels, catamarans, and more trimaran designs...'

We don't do what everybody else does and that's why we are being successful in the US; not because we make the same ships as everybody else, but because we do something that's quite different'.

F-35 AND LCS: SAME DESIGN FAILINGS

According to J. Michael Gilmore Director of operational test and evaluation (OT&E) at the U.S. Department of Defense, the US Navy's Littoral Combat Ships (LCS) are over budget, far behind schedule and cannot perform any of their designated missions, government auditors told a Senate panel. Like the F-35 Lightning II Joint Strike Fighter, the LCS was supposed to be a modular design, with ships swapping out 'mission package equipment' depending on mission requirements. This has never 'happened' and like the Lightning II (criticised for the same and other reasons by Dr Keith Joiner, UNSW and previously DG Australia's now defunct OT&E Organisation) the ship is unlikely to fill the void and / or be better than previous designs.

TOWNSVILLE CHINOOK HELICOPTER MAINTENANCE

Townsville has been given a boost with the awarding of a significant helicopter maintenance contract to support Chinook CH-47 helicopter – used by Army in support of the Amphibious Task Group and capable of being embarked upon HMA Ships ADELAIDE, CANBERRA and CHOULES. Minister for Defence Industry, the Hon Christopher Pyne MP, announced that Boeing Defence Australia has been selected as the preferred supplier for the maintenance of Army's Chinook Foxtroop helicopters. The value of the contract is \$AUD20 million over five years January 2017 and will create a core of 20 highly skilled jobs in Townsville. It also means Townsville will be the centre of all Chinook Foxtroop Helicopter maintenance in Australia. ■

FORMATION OF NAVY PART II – THE ISRAELI DEFENCE FORCE NAVY, 1960-1979

By Nir Maor

This paper continues the story of some of the major events behind the inception of the Israeli Defence Force (IDF) Navy, developed in Paper I. The paper starts with the beginning of the Middle East Arms race emerging from the Suez Crisis (Operation Musketeer), the increasing dominance of the U.S. in the region and the challenge posed by Soviet expansion (from Eastern Europe) into the Eastern Mediterranean and the Middle East (often through proxies), over the same time frame. This posed many challenges to Israel and to the IDF Navy in particular, many of which are still present today and remain instrumental in shaping and forming today's IDF Navy. Many of its early achievements are unknown in the West. Part II, by Rear Admiral Nir Maor IDF Navy (rtd.), examines the Israeli Defence Force Navy, from 1960 to 1979.

INTRODUCTION

By the early 1960s, Israel was facing a number of conjoining threats:

- hostile land neighbours, often acting as proxies, armed through the Soviet Union, politically aligned with East European Warsaw Pact countries;
- Middle East nationalism;
- The increasing reliance of 'Big Oil' to feed industrial and industrialising economies (mostly drawing from the Middle East);
- The heightening of Cold War tensions over the Cuba crisis, in South East Asia (Vietnam) and the building of the Berlin Wall;
- All taking part during a revolution in naval affairs (RNA), as anti-ship and SAM missile systems began to replace the gun and older cruisers and battleships became obsolete.

THE BOATS OF CHERBOURG

The arms race in the Middle East continued to accelerate during the early 1960s. The Israeli Navy's obsolete Z-class destroyers were facing the more advanced Skoryi destroyers, purchased from the USSR. The Navy was forced to respond. CNO at the time was Yohai Ben Nun who, as detailed in Part I, was instrumental in bringing about the sinking of the Egyptian flagship during the War of Independence. For Yohai, inventiveness, innovation and adaptation was instrumental to his way of

life rather than following more obvious or orthodox solutions. Much to the consternation of his Navy Staff, he rejected the recommendations to use larger destroyers; instead instructing his staff to consider designing and building smaller, more sophisticated vessels that he believed would get the job done.

Yohai placed great emphasis on sophisticated equipment – essentially dividing naval content (weapons, sensors, crewing etc.) from the hull (sometimes considered as the platform). After heated debate, it was decided that the 'boats' (subsequently to be known as Missile Boats) should be based on an existing hull or platform whose operational functionality had already been proven in a [West] European country.

It is not unclear whether or not Yohai envisioned the vessel in detail. However, his staff made a huge effort to take forward his design thinking. They were aware of the miniaturization process evolving in technology and electronics. They therefore decided to adopt the concept of designing highly sophisticated smaller [missile] 'boats', each capable of working alone or networked, and supporting electronic systems and equipment with the ability for over-the-horizon picture forming and sharing the operational picture to shape the tactical moves and develop firing solutions, in advance. These requirements did not make sense to European shipyards, but eventually, a small shipyard in Cherbourg (CMN) agreed to take on this task. The budget was for twelve small boats. The contract was signed in 1964, and the project, known as The Boats of Cherbourg, got under way.

THE SIX-DAY WAR

The timing of the Six-Day War (June 1967) couldn't have come at a worse time for Israel's Navy. The old destroyers were about to be decommissioned, and the missile boats had not yet arrived. The S-class submarines were suffering from poor technical conditions and on the brink of being decommissioned, while the Israeli crews were in England studying for the next model – the T-class submarines. The Navy made up for the shortage of vessels by recruiting fishing boats, and by imposing many maritime tasks on the naval commando forces. However, because much of the Navy was concentrating more on new projects than they were on maintaining current capabilities, the war caught them mentally unprepared when it occurred. The forces that went out to strike the enemy returned without accomplishing their missions.

Israel's Flotilla 13 Commandos were forced to base their operations in Alexandria on the former Royal Navy S-Class INS TANIN. The war began

One of the Cherbourg Saar-2 Missile Boats 1973.





USS LIBERTY showing damage inflicted 8 June 1967

in the morning; that afternoon the Commandos got the green light to commence operations. In total there were three operations in Syria (all failed) and two in Egypt, both of which also failed. On the afternoon of the first day of the Six-Day war, Flotilla 13 Commandos embarked upon the TANIN. On 5 Jun 1967, TANIN sailed towards the port of Alexandria and positioned herself on the sea bed and deployed the Commando team.

Inside the Harbour, the Divers could not find any targets and returned to the rendezvous point with the submarine but failed to connect up. Again the divers swam ashore in order to hide awaiting a new extraction position. After the waiting period had expired, TANIN went up to Periscope depth and detected an Egyptian Sloop. The Submarine's Captain decided to attack, but although the sonar gave good range and bearing information, there was either a bad target solution or a technical problem with the torpedoes. In any case, TANIN failed to hit the sloop. TANIN was then itself attacked with depth charges, and although the submarine got away it was damaged. The following night, TANIN prepared again to rendezvous with the divers, but when it came close to the rendezvous point, a radio transmission indicated that the Commandos had been captured. For six months the commandos were imprisoned; finally returning to Israel after a prisoner exchange. For his persistence in trying to recover the Flotilla 13 Commandos, the Captain and submarine were awarded The Medal of Valor, a mark of distinction carried by the crew and succeeding INS TANIN's to this day.

The Navy crews were frustrated by their failures, especially when compared to the impressive achievements of ground and air forces. On the third day of the war, the Navy crews spotted a suspicious target manoeuvring along the Sinai coastline. Eager to make up for their lack of operational impact, the Navy was very keen to prosecute a successful attack. With their all too hasty identification procedures, an American Signals Intelligence ship, working for the NSA, was attacked by Navy MTBs supported by the IDF Air Force (as targeted by Navy). 34 crew members were killed and 171 wounded. The attack for many years was covered up due to a combination of embarrassment and political sensitivity on all sides and the need (attributed to President Johnson) to avoid a possible direct confrontation between the U.S. and the USSR in support of either side. A memorial displayed in the Israeli Navy Museum in recognition of fellow sailors, states simply:

We express deep sorrow for the 34 friends who died from our hands, in combat [it was a terrible mistake] ... May their memory be blessed.

The veterans of MTB Squadron.

The Six-Day War was concluded with a decisive victory by the IDF. The battles took place far away from Israel's original borders. As a result, after the war, the IDF found itself responsible for large areas in the Golan Heights, the West Bank, and the Sinai Peninsula. Its coastline border was now five times longer than it had been before the Six-Day war. The Navy

pressed hard the case that it required a significant boost to its power. This was challenged by the other two services due to the Navy's lack of success during the war, the Liberty incident and serious mishaps that took place immediately following the war.

DISASTERS

In the aftermath of the Six-Day War and still at a time of heightened tension, the destroyer EILAT (ex HMS ZEALOUS) was in international waters on its way to show the flag in the new territories in which the fighting had taken place during the six-day war. The Navy was aware that the Egyptians had sea-to-sea missiles but it ignored this information. As the destroyer got closer to the Egyptian coastline, it was hit by Styx missiles launched against it from two Egyptian missile boats firing from the evacuated port of Port Said. The destroyer sank and out of a crew of 199, 47 were killed and over a hundred wounded.

Three months later, INS DAKAR (ex-British T-class submarine HMS TOTEM) left Portsmouth on its way to Israel. It was one of the three T-class submarines that had been acquired in England. DAKAR sank off Crete with a crew of 69 before ever reaching Israel. The submarine was found 31 years later in 1999. It was not until 2015, that the reasons were identified by IDF Navy to be due to either technical failure or a collision. Potential actions claimed by the Soviet and Egyptian Navy's were ruled out. It would appear that no emergency measures had been taken, before DAKAR dived rapidly; suffering a catastrophic hull rupture as she passed through her maximum depth and plunged to the bottom at 3500m (1900 fathoms).

The combination of failure to prosecute the enemy during the war; together with the disasters following the war nearly led to the abolishment of the Navy and to it being relegated to Coast Guard status.



The bridge of INS DAKAR recovered from the deep.

THE WAR OF ATTRITION 1968–1970

The first group to start to overcome the crisis were the naval commandos. This unit felt the weight of most of the Six-Day War failures. However, the commanders were driven to transform their frustration and anger into ambition. This opportunity came about during the War of Attrition. The naval commando managed to overcome the crisis, but also to restore self-confidence within the Navy as well as gain trust from outside and the population as a whole, shattered by the unnecessary loss of EILAT and the mysterious disappearance of INS DAKAR.

In September 1969, the Navy led and landed tanks on the Egyptian side of the Suez gulf as part of the exchange of blows between Israel and Egypt during the War of Attrition (due also partly in retaliation to the sinking of the EILAT). This was especially painful to Egypt. Another action took place in preparation for the landing when the Shayetet 13 unit with Limpet

mines attacked and sank the Egyptian Motor torpedo boats (P-183s) that had been endangering the movement of the Landing Craft. The attacks by the naval commando against the Egyptian Army and its Navy along the Suez Gulf caused the Egyptians to reconsider whether the ongoing war of attrition was worth the costs and ultimately to end it. The actions also helped significantly to restore confidence in Navy and Navy in itself.

THE BOATS OF CHERBOURG AND THE GABRIEL MISSILE

While the combat units were engaged in the War of Attrition, two courageous and innovative projects were being planned at the headquarters and in industry.



The Gabriel Missile.

The ground-to-ground missile programme, being developed by the defence industries (and later abandoned due to a lack of interest), was adopted by the Navy and transformed into an anti-surface / ship missile. This project advanced at a random pace but with excellent / serendipitous timing – when the small and fast boats were being constructed in Cherbourg. This innovative system – the Gabriel Missile System – and concept integrated German engines (MTU), a French RADAR (Neptun), an Italian fire control RADAR (Selenia), and an Israeli missile. A new combat-acquisition doctrine was also created by integrating all components of warfare. This further maximised the capability of the boats; while encouraging Syrian and Egyptian forces to fire first (the Styx missile was twice the range of Gabriel) and avoiding being hit (through effective use of EW and Chaff). All of that happened just in time – on the eve of the Yom Kippur War.

Escape from Cherbourg

The Boats of Cherbourg were so called after an operation planned and orchestrated by the Israeli Navy to liberate five remaining Sa'ar Type 3 Class Missile Boats from the French port of Cherbourg, where they had been built. The boats had been paid for by the Israeli government but had not been delivered due to a French arms embargo imposed in 1969. The operation took place on Christmas Eve, 24 December 1969.

THE YOM KIPPUR WAR

In October 1973, Israel was surprised by a coordinated attack launched by the Syrian and Egyptian armies. The IDF ground forces were taken by complete surprise, but the Navy was not. The failures of the Six-Day War had encouraged Navy to be well-prepared, and to think through the fight that they knew was looming in order to restore their place in Israel's

affections and order of battle. While forces on the ground and air were involved in bitter battles attempting to stop the enemy, the Navy hit back against both the Syrian and Egyptian navies and defeated them.

The Israeli Navy was ready for the 'Yom Kippur' war. Excellent intelligence, sophisticated weapons and equipment, innovative and well thought through doctrine and, above all, a restored and invigorated fighting spirit were the secret to the Navy's success. On the morning of October 6th missile boat Task Forces were sent forward to prosecute the enemy and drive them from the seas.

A force under the command of Captain Yomi Barkai, the Missile Boat Flotilla Commander, was sent toward Syrian waters. Yomi gave orders to the other boat commanders on the radio; repeatedly emphasising their duty and that it was his intention to meet, fight and sink the Syrian Navy, 'even if he had to chase them back into their very own base ports'.

On their way north, his force detected a Syrian torpedo boat and sank it;



Smiles and relief the morning after the Battle of Latakia.

later a minesweeper was detected near Latakia port and similarly sunk. A force of three Syrian missile boats detecting the Israeli Flotilla fired a salvo of Styx missiles on Yomi's force but none of the missiles hit, due to: thorough preparedness by the crews; the use of excellent EW; and, the deployment of chaff. Through ingenious manoeuvre, electronic warfare and subterfuge, the Cherbourg boats managed to lure the enemy missile ships to within the range of the Gabriel missiles (which was half the range of the Styx missiles) and sink the enemy's ships. The Israeli missile boats engaged using Gabriel missile salvos, and all three vessels were sunk. Historically, this was both a significant maritime victory – keeping all remaining Syrian Navy vessels in port for the rest of the war – and the first naval battle to see stand-off combat between surface-to-surface missile-equipped missile boats and the use of EW deception and detection.

For the Soviet Union, it also gave indication that the West was learning fast and that its maritime systems and doctrines were now better than those deployed against them by the USSR, during the Six-Day War. These hard won lessons (also from Vietnam) enabled the US to build on strength and take on the Soviet Union in the 1980s, during the Reagan-Thatcher re-armament era – ultimately breaking the Soviet Union. This though is another story.

During Yom Kippur, approximately 50 Styx missiles were fired at Israeli Navy ships – without hitting any of them. Approximately 55 Gabriel missiles were fired by the Israeli Navy – half of them hitting their (Syrian and Egyptian) targets.

This was an especially successful combination of warfare concepts, doctrine and technology – but not only that. The Dabur-class boats too, known for their simplicity, were successful in their mission during the Yom Kippur War, as well as Navy Commandos (Flotilla 13). The Navy had

grown and learned from failure. Leaders, Navy Commandos and Sailors alike knew that technology alone was not enough to pass the test of war – without the combat spirit to take the war to the enemy, all could be lost. It was a very different Navy and space to be in, than the one Navy had been in six years earlier. Was it largely the result of the frustration caused by failure in the previous war? Maybe...

TAKING THE FIGHT TO TERROR

The Navy was greatly applauded by the Israeli military headquarters due to its major victories at sea. It had been well-prepared by both its technology and doctrine and victory in the next war, when it came, was not a surprise. However, the threat from terror was viewed then by the Navy as a marginal disruption that should not distract the Navy from achieving its goals.



A terrorists jet ski intercepted by IDF Navy.

The Attack along the Coastal Road

In March 1978, two terrorist boats coming off a larger ship managed to land on the Israeli coast. The terrorists murdered 35 innocent civilians. This caused the Navy to reconsider its goals and including within its thinking emphasis on the fight against terror. Cultural change of this type is not easy. Due also to the Navy's pride in its achievements as a fleet in being and at sea, set against the necessity of it operating more like a Coast Guard.

Tight Enclosure

Two more successful terrorist attacks were achieved before the Navy's learned how to defeat them: Between the years 1977 and 1995 the Navy was successful in intercepting fifty-five attempted terrorist attacks launched from the sea. Thirty-two vessels were captured, and almost 44 terrorist boats, coming directly from Southern Lebanon, were identified and destroyed. During these years, the Navy developed new theories of naval warfare; while being equipped with unique weapons that could detect, identify, and destroy small and fast boats.

THE PERPETUAL NAVAL FLANK 1982

The sea was blocked for the terrorists but they continued their attacks on the ground by launching rockets as well as dispatching terrorists to Israeli consulates overseas. In June 1982, the Lebanon War started. The Navy made it possible for the IDF to carry out a classic naval flank manoeuvre. Absolute naval superiority made it possible to have freedom of movement off the Lebanese coast. The Navy corps landed armoured forces and infantry beyond the enemy's lines, not far from Beirut.

Terrorists concentrated in Beirut had to flee to the north, towards the seaport of Tripoli. Eventually, as part of the cease fire agreements, they were deported from Lebanon and established their offices and institutions in Tunis. Seaborn terror became a distant threat – far away from the Israeli coastline. Deportation of terrorists from Lebanon was only a temporary

relief. Unable to fill the vacuum created following the deportation of various militias, the Lebanese army was powerless in preventing a new player emerging on the scene – Hezbollah, sponsored directly by and acting as a proxy of Iran.

Rear Admiral Nir Maor IN (Ret.) was commissioned on graduation from the Israeli Naval Academy in 1974 and commenced his service in the Missile Boats Flotilla, before commanding a Sa'ar boat, INS GA'ASH (one of the boats of Cherbourg). In 1982, he transferred to the Submarines Service, qualifying to become a submarine commander from the South African Maritime Warfare School, in Simon's Town. A year later he was given command of a Gal class submarine (INS GAL). He went on to become a Missile Boat Squadron Commander and then the IN Submarines Flotilla Commander. In 1994, he was appointed Naval Commander of the Ashdod area and between 1996 and 1999 appointed Chief of Personnel Command (the Royal Navy equivalent of Second Sea Lord or, in RAN, Deputy Chief of Navy). Retiring after 28 years' service, having spent much of that time in high-tempo, low intensity conflict, Nir Maor served in both the Yom Kippur war, 1973, and the Lebanon in 1982. ■

Vice Admiral Michael (Yomi) Barkai



Born in Bucharest (Romania) in 1935, after the holocaust his family tried to immigrate to Palestine (illegally). Their ship was intercepted and the family was sent to a British detention camp in Cyprus. After the state of Israel was established, the family were able to immigrate to Israel and settled near Tel Aviv, where Yomi became a keen sailor. At the time military service was compulsory and he chose to enlist in the Navy. He graduated from the Israeli naval academy with honours and was sent to serve in the MTB squadron and later, in the destroyer INS EILAT. In 1959 he volunteered for the submarine service and was sent to Portsmouth, England in 1966 (18 years after having been detained by the Royal Navy!), where he qualified as a submarine commander by successfully completing the renowned 'Perisher Course'. In 1967 as a Commander he became the Captain of the INS Submarine RAHAV. Later on he became the Ashdod base commander. In 1971 he was given command of a missile boat; then being appointed as Missile Boat Squadron Commander and after a short time (on promotion to Captain) he became the Missile Boat Flotilla Commander. Tragically, his Brother was lost at sea in the INS DAKAR sinking and this affected him greatly in later life.



GERMAN NAVAL OPERATIONS IN THE BALTIC 1945

By Geoff Crowhurst

By the beginning of 1945 the end for Nazi Germany was obvious with its forces on the retreat on all fronts. The Western Allies were on Germany's borders and the Russian army was approaching the Baltic coast driving all before them. By the end of January, the Soviets had trapped the German forces in Eastern Prussia along the Baltic coast between Danzig in the west, and Memel in the East. With the fall of Memel on January 27th, German forces and civilians concentrated around the coastal cities of Königsberg, Pillau and Danzig. Refugees from Memel increased the number to around 2.5 million people. Plans for the evacuation of military personnel and civilians were in place by the end of 1944, but were delayed by the local Gauleiter Erich Koch, who forbade any evacuation on threat of immediate execution, although he fled to Berlin in January. This paper has relevance for today, including mass migration by sea and Germany's own Dunkerque, that was to be instrumental to its post WWII rebuild.

INTRODUCTION

By 1945, few German navy surface units remained, most of them in the Baltic supporting ground troops and some destroyers sheltering in the fiords of Norway. Heavy cruisers HIPPER and PRINZ EUGEN, armoured ships LUTZOW and SCHEER were present as well as light cruisers LEIPZIG and EMDEN. There were some destroyers present as well as numerous light coastal vessels. The two World War One Pre-Dreadnoughts SCHLESSEN and SCHLESWIG-HOLSTEIN, veterans of the battle of Jutland, also served in the Baltic theatre. In early 1945, the remaining destroyers stationed in Norway were ordered to the Baltic. Although intercepted by Royal Navy surface forces, all of them completed the journey, although some sustained damage.

BALTIC OPERATIONS

During the war the Soviet naval presence in the Baltic was minimal. The surface fleet was active at the beginning of hostilities, mainly concerned with laying defensive minefields, but played no part in the later years of the war. The Soviet submarine force was the largest in the world at the beginning of the war, with some of the most modern designs available. However Stalin's purges of the officer corps and a lack of training, morale and aggression led it to be ineffective throughout the conflict. The Soviet Baltic Fleet was bottled up in the Kronstadt/ Leningrad area from 1941 until late 1944 by extensive German and Finnish minefields and naval forces. With the armistice between Finland and Russia in September 1944, the Soviet Navy was once again able to advance into the Baltic to engage German forces, however other than a few sorties by submarines, the Red navy remained in port.

The Germans had carried out naval operations around the Baltic coast in 1944, evacuating military formations from the Baltic States ahead of the Soviet forces. Light coastal forces evacuated military and civilian personnel from Memel prior to the Russian capture of the city. German surface units

began the year supporting the army by shelling advancing Soviet forces along the east Baltic coast. In mid-January PRINZ EUGEN shelled Russian troop concentrations around Samland in East Prussia, expending 871 8 inch shells. EMDEN took on the mortal remains of Generalfeldmarschall Hindenburg and his wife and evacuated them from Königsberg to Pillau. It was then loaded with refugees and sent to Kiel for repairs and refitting. It was badly damaged in dry dock in RAF air raids and was finally towed out into Kiel harbour and scuttled on 3rd March 1945.

SUBMARINE WARFARE

With the opening of the Finnish/German mine barrier, Soviet submarines began to sortie into the Baltic. While few submarines took the opportunity, they caused significant loss of life. On 30 January the 25,848t passenger liner *MV Wilhelm Gustloff* left Gotenhafen bound for Kiel. Aboard were an estimated 10,582 refugees and military personnel, crammed into any space that could take them. The exact number will never be known

as the crew stopped counting at 6050. Estimates put the civilian number at 8956 with approximately 5000 of those being children. The remainder were non-essential military personnel and wounded. *Gustloff* sailed with three other ships, but two of them turned back with engine trouble, leaving the sole escort of one torpedo boat. The two ships sailed out into atrocious weather, with a temperature of -10 and heavy snow falls.



Figure 1 Light Cruiser EMDEN operating in China 1931.

Gustloff's captain, Friedrich Petersen, kept the ship close to the coast on the outward journey to avoid Soviet submarines that had been reported in the area. At around 1800 Petersen turned *Gustloff* out into the Baltic to avoid inshore mines, against the advice of his military advisor. The Germans had a very low opinion of Russian submarines due to a lack of activity during the rest of the war so Petersen decided the risk from submarines was less than the risk from mines. Unfortunately for him and his passengers and crew, he sailed across the bows of one of Russia's best submarine commanders.



Figure 2 The bombed and camouflaged Light Cruiser ADMIRAL HIPPER in dry dock at Kiel 1945 (IWM).

Unknown to the Germans, they were being stalked by Soviet submarine S13. It was commanded by Captain Alexander Marinesko. He was considered by the navy to be a brilliant commander and tactician. Unfortunately he was also a chronic alcoholic who had issues with authority figures. Prior to leaving on the current patrol (he came aboard drunk and under escort), he was facing court martial for insubordination. S13 discovered *Gustloff* at around 1900 and started manoeuvring to gain an attack position. Shortly afterwards, the Germans made things easier for Marinesko by turning on their navigation lights. Petersen had received a message warning him of an approaching minesweeper convoy and turned on his lights to avoid collision, again despite warnings from his military advisor. Even in the poor light, Marinesko could see anti-aircraft armament on the German ship, which made it a legitimate target, despite it clearly being an ocean liner.

At 2100 on 30 January, S13 gained an attack position and fired three torpedos. All three hit and *Gustloff* immediately began to sink. LOWE, the escorting torpedo boat, attacked S13 and drove it off. *Gustloff* quickly foundered and rolled onto its port side, sinking after 40 minutes. Only one



Figure 3 The sinking of the Wilhelm Gustloff 30 Jan 1945.

lifeboat was lowered, as the rest had frozen to their davits in the extreme cold. The passengers and crew who survived the explosions went into water that was between 4 and 0 degrees Celsius. Several ships, including the minesweeper convoy, rushed to the scene and rescued about 1200 survivors. An estimated 9400 people died in the attack, making this the worst sinking for loss of life in maritime history.

FALL OF EAST PRUSSIA

February saw the evacuation of East Prussia move into full swing. Convoys of merchant ships, escorted by coastal forces began running between the besieged cities of Königsberg, Pillau and Danzig to the ports of Kiel, Swinemünde and other safe havens. On 8th February LUTZOW and its escorts bombarded Soviet forces around Fraunberg-Elbing. For the rest of the month LUTZOW, ADMIRAL SCHEER and PRINZ EUGEN kept up a steady bombardment of Soviet forces in East Prussia. Their fire was particularly accurate on the occasions when the Luftwaffe could provide an artillery spotter plane and Soviet troop concentrations, tank columns and artillery positions were all effectively engaged.

By February the evacuations had gotten well under way. CinC Kriegsmarine Grand Admiral Karl Donitz ordered

... "Every ship, every cruiser, destroyer, torpedo boat, merchant ship, fishing boat and rowboat"... to be used to evacuate East Prussia before it fell to the Soviets.

The navy now threw itself into the operation. In early February another disaster befell the Germans. On the night of 9th February, the 14,660t liner *General von Stuebing* sailed from Pillau for Swinemünde with 4267 passengers on board. The majority were military, consisting of wounded soldiers, medical personnel and assorted servicemen and women who were considered non-essential for the defence of the city. Also present were over 800 civilians, mostly women and children. *Steubing* sailed with the torpedo boat T196 as an escort. Just after midnight it was hit by two torpedoes fired by S13. As with *Wilhelm Gustloff* Marinesko had sighted the ship several hours earlier and had manoeuvred into an attack position by midnight. The torpedoes opened the ship's hull to the icy water and *Steubing* sank within 20 minutes. T196 depth charged S13 and drove it off then returned to *Steubing* rescuing about 300 people. Over 3900 people perished in the attack.



Figure 4 S-13 a Stalinets-class submarine of the Soviet Navy on 1996 Russian Stamp.

Throughout February and into March the Germans stepped up both their gunfire support and evacuation efforts of the besieged garrisons of East Prussia. In the Bay of Danzig are situated two long sand spits, the Hela Peninsula and the Frische Nehrung. Both were by now crowded with refugees. Each night thousands were taken off by small coastal vessels and ferried to larger ships waiting in the bay. Makeshift docks were constructed to facilitate the evacuations and during the hours of darkness they were crowded with people. However when daylight came, Soviet ground attack aircraft would swoop in to destroy the docks and strafe the huddled refugees. With darkness each night the docks would be quickly rebuilt and the evacuations would begin all over again.

In March enemy action began to take its toll on the major German units. EMDEN had already left the Baltic in February laden with refugees and did not return. Whilst refitting in Kiel it was bombed by the RAF and severely damaged. It was eventually blown up in May 1945 to prevent it falling into



Figure 5 Alexander Marinesko Captain of S13 Hero of the Soviet Union.

enemy hands. The Pre Dreadnought SCHLESWIG-HOLSTEIN had been bombed by the RAF in December 1944 in the harbour of Marienberg and had foundered on the bottom with its upperworks clear of the water. In March 1945 it engaged the advancing Russian forces and was finally scuttled by its remaining crew on 21 March. Although starting 1945 in Gotenhafen, HIPPER was so badly run down that it had taken no part in the action and was moved to Kiel in January 1945. Whilst refitting for a return to the Baltic, it was heavily damaged during an RAF air raid on 3rd May and was scuttled later that day.

Throughout February and March it fell to PRINZ EUGEN, LEIPZIG, SCHEER and LUTZOW to provide the main gunfire support effort to the army ashore, although the other Pre Dreadnought SCHLESIEEN used its guns to great effect against the Soviet forces around Danzig during this time. They were not all constantly available, due to the need to periodically withdraw to replenish fuel and ammunition. Locating adequate supplies of the correct ammunition proved to be a major headache for the navy, but sufficient supplies were eventually located to enable the gunfire support to continue throughout March and April.

THE HIGH END

After providing fire support throughout March the light cruiser LEIPZIG was a spent force. Capable of cruising at only 6 knots, as a result of damage caused in a collision with PRINZ EUGEN in October 1944 (which had been deemed too difficult to fully repair), it was decided to remove the cruiser from the Baltic. On 24th March, LEIPZIG picked up refugees from the Hela Peninsula and sailed for Denmark. It was remorselessly attacked by Soviet aircraft until it left the Baltic and despite having a top speed of only 6 knots, it avoided two attacks by British submarines to arrive safely in Denmark on 29 April. It never sailed again and after the war was used

as a barracks ship for the German Minesweeping Administration. It was scuttled in July 1946.

In February and March LUTZOW and SCHEER both did outstanding work in supporting the army in East Prussia. In early March LUTZOW withdrew to Swinemunde to restock fuel and ammunition and was back supporting the army off Gotenhafen and the Hela Peninsula by 23rd March. On 8th March SCHEER was ordered to Kiel to have its main guns rebored due to prolonged firing over the last two months. Taking on 1000 refugees, it was redirected to Swinemunde where it delivered its human cargo and was sent back into action around the city of Kolberg to shell Soviet forces that had broken through the German land defences. After helping to stabilise the front (and firing off all of its main gun ammunition), SCHEER again left for Kiel with 400 refugees aboard, arriving on 18th March. Repairs to the guns began straight away and continued into April. However on 9th April SCHEER was severely damaged in an RAF bombing raid and capsized in Kiel harbour.

In April, tragedy again struck the evacuation. The German troop ship *Goya* was already a survivor of several refugee runs across the Baltic. On 16th April it sailed from Gotenhafen loaded with refugees, both military and civilian. Like the *Wilhelm Gustloff*, accurate records were not kept and the number of persons aboard is thought to be somewhere between 6700 – 7000. *Goya* sailed in a convoy of two other refugee ships and two minesweepers. The convoy was attacked by Soviet bombers and *Goya* was hit by one bomb, which only caused minor damage. Sometime before midnight the convoy was sighted by the Soviet submarine L3. This was primarily a mine-laying submarine but it also carried torpedoes. Its commander, Captain Konovalov, manoeuvred L3 into an attack position and fired two torpedoes into *Goya* at 23.55. Both hit, one in the bow, the other amidships. *Goya's* back was broken and the two halves sank in around four minutes. While the minesweepers drove L3 off, the two other refugee ships managed to save only about 180 of *Goya's* passengers. Over 6000 people were killed, making this the second worst maritime disaster in history, after the sinking of the *Wilhelm Gustloff*.

In early April LUTZOW withdrew to Swinemunde to restock and refuel, having fired off all its main gun ammunition. It arrived on 8th April and was lucky to survive an RAF air raid on 13th April. However the RAF returned on the night of the 16th April and this time, LUTZOW'S luck ran out. A near miss, which was thought to be from a Tallboy bomb, split LUTZOW'S side for 30 metres, resulting in a 56 degree list to starboard. It also took two hits from 1000lb bombs which fortunately failed to explode. The list was corrected by salvage vessels and LUTZOW settled on the bottom of the harbour with its decks two metres above water. The two direct hits had knocked all but A gun turret out of action. It was clear the LUTZOW was beyond repair but it could still be used as a floating battery. In late April and early May it shelled approaching Soviet forces until its ammunition was expended. LUTZOW was then scuttled in harbour.



Figure 6 9 April 1945 ADMIRAL SCHEER hit by five RAF Tallboy bombs and capsized in Kiel Harbour.

PRINZ EUGIN had accompanied LUTZOW to Swinemunde to restock and refuel. It survived both air raids unscathed. It was then loaded with refugees and sailed for Denmark, arriving at Copenhagen on 20th April. There it stayed until it was handed over to the Royal Navy on 8th May 1945. During March and April 1945 PRINZ EUGIN had fired 2025 8 inch shells and 2446 4inch shells in support of the army. PRINZ EUGIN was eventually handed over to the USN and ended its days as a test ship for two atomic bomb tests, both of which it survived. It sank five months later due to a slow leak caused in the bomb tests.

SCHLESSEN had been active in the Baltic in March and April, bombarding Soviet forces around the Danzig area. At the end of April its magazines were empty and it sailed to Swinemunde loaded with 1000 wounded soldiers, to replenish fuel and ammunition. As it arrived it hit a mine and had to be beached in shallow water. SCHLESSEN was used as a floating battery against advancing Soviet forces and was blown up to prevent capture. However enough of it survived to become a target ship for the Soviet air force and navy and it was eventually broken up between 1949 – 1956.

ÜBERALL

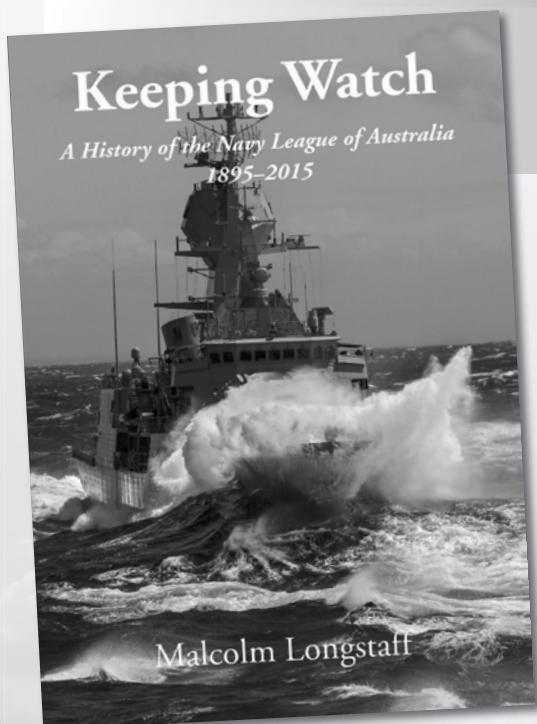
Even without the support of the heavy units, the evacuation continued well into May. The remaining destroyers and coastal forces kept up a steady shuttle service between East Prussia and the west, bringing out every serviceman and civilian it possibly could, saving them from an uncertain future under Soviet rule. When the war ended on 8th May with the German unconditional surrender, the evacuation continued. For about 3 days after the official capitulation the army continued to hold the Soviets back while the small ships continued their mercy mission with the Soviets trying to stop the evacuation. Many unofficial evacuation missions continued for days after hostilities ceased in East Prussia. By mid-May it was over. Although records for the evacuation are poor, it is estimated that the navy managed to evacuate 2 – 2.5 million people out of East Prussia to safety in the west. In a survey carried out in the early 1960's, it was estimated that one in every twenty people living in West Germany had relatives saved by the evacuation. It is the single largest mass movement of people in human history. ■



Figure 7 PRINZ EUGEN 1946 at Bikini during atomic bomb tests at far right in this photograph (Image National Geographic)

Keeping Watch

**A History of the Navy League of Australia
1895–2015**



Written by Malcolm Longstaff OAM, the 279 page book is illustrated with over 70 images and traces the history of the League in Australia since 1895 when the Navy League of Great Britain's Colonial Committee began to promote the aims of the League throughout the British Empire leading to the formation of the first Australian Branch in Launceston the following year.

This delightful and informative book is an essential read and much, much more than a coffee-table glossy. Not only does the book tell the story of the growth of the League in Australia, it entwines three histories — that of Australia from Federation; that of the Royal Australian Navy (which celebrated its 100th Anniversary in 2013) and that of the Navy League Sea Cadet Corps. The first Navy League Sea Cadet Unit was started in New South Wales in 1920 and the organisation expanded over the following half century to become, by the early 1970s, too large for a voluntary organisation to manage. The Sea Cadets were taken over by the RAN in 1973, becoming the Australian Naval Cadets of today. Many Navy League cadets went on to join the Royal Australian Navy, making a substantial contribution to the service.

Keeping Watch not only provides a maritime 'who's who' over the past 120 years but interweaves this narrative with that of Australia, amidst the international setting of two World Wars: the first of national formation and identification; the second for existential survival against Japan. As George Orwell may have put it 'those who do not know their history, have no future'. The Navy League is one of those institutions which are part of Australia's history, at first as an off-shoot of the British Institution and, after 1950, as an Australian autonomous body, The Navy League of Australia. These institutions reflect us and our people — and who we aspire to be. Making good use of many contemporary press and other reports which reflect the attitudes of our society in past decades, *Keeping Watch* reminds us who we were, who we are and who we may purport still to be. It connects our past with our future. Today the Navy League of Australia has branches throughout Australia, represents and promotes the views of citizens concerned in the maritime defence of Australia, continues to support elements of the Australian Navy Cadets, and publishes the League's quarterly national magazine, *The Navy*, which has been published continuously since 1938.

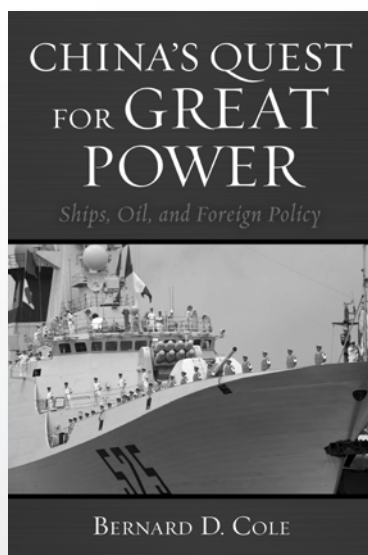
Malcolm Longstaff is well qualified to tell the story of the League. He has had a long-standing interest in maritime affairs and has been an active member of the executive committee of the NSW Division of the Navy League since 1970 and the Division's Vice President since 2014. His excellent book is an essential buy for anyone seeking to understand our past and conceptualise our future. It tells the League's story, from the perspectives of humanity and the sea. It is a great present for summer — and a great read by the beach. We are girt by sea, after all!

**AVAILABLE
IN SOFT BACK
\$30
PLUS \$15 POSTAGE**



John Jeremy and Malcolm Longstaff presenting a signed copy of *Keeping Watch* to the Patron of the NSW Division of the League, His Excellency, The Governor of New South Wales, The Honourable David Hurley AC DSC (Ret'd).

Copies of *Keeping Watch* can be ordered from The Navy League of Australia, NSW Division. Simply download the order form from the League's website ~ www.navyleague.org.au.



China's quest for Great Power

Ships, Oil and Foreign Policy

Bernard D. Cole

Naval Institute Press
(November 15, 2016)

ISBN-10: 1612518389

ISBN-13: 9781612518381

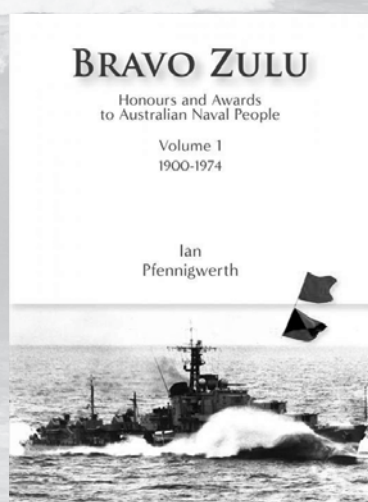
\$US34.95; \$AS47.50

This pertinent book comes at a time described by President Xi Jinping himself as being a hinge moment, as the U.S. Presidency changes and potential new flash points emerge in the South China Sea. This may well be a hinge moment between different 'states' of the U.S. as it moves to a new and presently uncharted place within the democracies. And it is worth stating here that the U.S. remains a democracy and that President-elect Trump was duly elected, democratically. The danger appears three fold: through underestimation of the U.S. and its ability to renew and recover; a misunderstanding of the democratic toughness and resolve the U.S. can show when threatened; and an overestimation of perceived U.S. and its allies weakness. All three of these mean that in the next six months as President Trump comes into power he and his Allies are going to be tested by events – both natural and conspired. He will not have much time to think – and this will be the main purpose of those enemies of the U.S. and the Global West. To disrupt, disorganise and demoralise the U.S. and its Allies.

Cole's book addresses these issues and more. He adopts a simple rubric by attesting that China's national security strategy is based upon the trifecta confronting China: foreign policy; energy security and naval / maritime power. This itself would be confronting but as Cole also identifies a 'collection of eighty speeches by Xi, the majority of them dealing

with domestic issues, Asia-centric, and rarely referring to the West, except for noting the century of humiliation'. He emphasized instead 'the need to retain the CCP in power to continue China's economic progress'. As identified in The NAVY Magazine (Flash Traffic) Xi has potentially been the subject of at least two serious coup attempts and there is opposition to him and his princelings, including from some of the Generals overseeing the South China Seas and military operations. Escalation by deliberation and accident cannot be ruled out by any or all of the sides confronting each other in the South China Sea. More significantly, Xi may have more cooperation and support from his erstwhile contenders outside China, than from within. This is a point Cole addresses, for the weakness of China's position may be the strength of the West's – by providing, potentially, an alternative route for the CCP to follow in the 21st Century. One that may enable its survival through an admixture of different policies and factional interstitial and existential alliances other than war. Australia may have a key role to play.

This is an important book. Cole makes a significant contribution to our understanding of Chinese foreign policy choices, as naval modernization continues apace and energy security concerns determine alternative courses of action be developed by the West. A vital summer read before the January inauguration.



Bravo Zulu

Honours and Awards to Australian Naval People Volume 1, 1900-1974

Ian Pfennigwerth

Echo Books Canberra 2016.

Hardcover ISBN 9780994491183

Paperback ISBN 9780994491190

\$89.00

Recently launched by the Chief of Navy, Vice Admiral Tim Barrett, and reviewed by eminent historian Professor Tom Frame of UNSW, the first volume of a book titled Bravo Zulu: Honours and Awards to Australian Naval People is now available. It contains the background stories to all honours and awards presented to Australian naval people between 1900 and 1974, linked to an outline of the development and activities of the Commonwealth Naval Forces (1901-1911) and its successor, the Royal Australian Navy (RAN). Between 1900 and 2014 over 3,750 Australian naval personnel received awards for their efforts, courage, sacrifice and service to the nation. Until now a comprehensive list of awards has been missing in the annals of Australian naval history. For the past six years Ian Pfennigwerth has been working with a team of volunteer researchers to explore the background of these honours and awards Imperial, Australian, and foreign, and the result is a book compiled for a general readership but with plenty of detail to satisfy the naval enthusiast. Whether it be a George Cross

for defusing mines during the World War II blitz of the UK, an American Silver Star for flying helicopters into intense enemy fire in Vietnam, or a Conspicuous Service Medal for quietly just getting the job done, these are the stories of the men and women who have been decorated for their service to the Royal Australian Navy. Some stories are mundane, but give the public an insight into the daily running of our Navy. Others, whose feats of courage under fire or bravery in risking their own lives in saving the lives of others, on and off duty, are truly inspiring.

Ian Pfennigwerth makes an important contribution. The debate about whether or not Navy should merit amongst its decorated sailors a posthumous VC remains unresolved. Notwithstanding, this and the next volume of Bravo Zulu provide a much over-looked history of Navy and its people under fire of which it can be duly proud.

Volume 2 will take the story to 2014 and is planned for publication in 2017.

STATEMENT OF POLICY

For the maintenance of the Maritime wellbeing of the nation.

CURRENT AS AT 1 JANUARY 2017

The Navy League is intent upon keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and capable maritime industry are elements of our national wellbeing and vital to the freedom of Australia. The League seeks to promote Defence self-reliance by actively supporting defence manufacturing, and the shipping and transport industries.

The strategic background to Australia's security is changing and in many respects has become much less certain following increasing tensions in East Asia, Europe and the Middle East. The League believes that Australia should rapidly increase the capability to defend itself, paying particular attention to maritime defence. Through geographical necessity Australia's prosperity, strength, and safety depend to a great extent upon the security of the surrounding seas and island areas, and on unrestricted seaborne trade.

The Navy League:

- Believes Australia can be defended against attack by other than a major maritime power and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea and air communication with our allies.
- Supports a continuing strong alliance with the US.
- Supports close relationships with all nations in our general area particularly New Zealand, PNG and the South Pacific island States.
- Advocates the acquisition of the most capable modern armaments, surveillance systems and sensors to ensure technological advantage over forces in our general area.
- Advocates a strong deterrent element in the ADF enabling powerful retaliation at significant distances from our shores.
- Believes the ADF must be capable of protecting commercial shipping both within Australian waters and beyond, in conjunction with allies.
- Endorses the development of the capability for the patrol and surveillance of all of Australia's ocean areas, its island territories and the Southern Ocean.
- Advocates Government initiatives for rebuilding an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia in times of conflict.
- Welcomes the 2016 Defence White Paper and the Government intention to increase maritime preparedness and gradually increase defence expenditure to 2% of GDP.
- Urges the strength and capabilities of the Army (including particularly the Army Reserve) and Air Force be enhanced, and the weaponry, intelligence, surveillance, reconnaissance, cyberspace and electronic capabilities of the ADF be increased, including an expansion in its UAV capability.
- requirements of our 5 new major warships and the many other essential maritime tasks.
- Recommends bringing forward the start date of the replacement frigate program.
- Recommends the timely replacement and increase in numbers of the current mine-countermeasure force.
- Strongly supports the early acquisition of large, long range and endurance, fast submarines and notes the deterrent value, reliability and huge operational advantages of nuclear powered submarines and their value in training anti-submarine forces.
- The League is concerned at the very long time before the projected 12 new conventional submarines can enter operational service, noting the increasing tensions and major changes now taking place in international relationships.
- Recommends very early action to provide a submarine base on the Eastern seaboard.
- Notes the potential combat effectiveness and flexibility of the STOVL version of the Joint Strike Fighter (F35 Lightning II) and supports further examination of its application within the ADF.
- Supports the development of Australia's defence industry, including strong research and design organisations capable of the construction and maintenance of all warships, submarines and support vessels in the Navy's order of battle, and welcomes the Government decision to provide a stable and continuous shipbuilding program.
- Supports the efforts by Navy to rebuild the engineering capability to ensure effective Fleet maintenance and sustainability.
- Advocates the retention in maintained reserve of operationally capable ships that are required to be paid off for resource or other economic reasons.
- Supports a strong Naval Reserve and Australian Navy Cadets organisation.
- Advocates a strong focus on conditions of service as an effective means of combating recruitment and retention difficulties.

As to the RAN, the League, while noting vital national peacetime tasks conducted by Navy, including border protection, flag showing/diplomacy, disaster relief, maritime rescue, hydrography and aid to the civil power:

- Supports the concept of a Navy capable of effective action in war off both the east and west coasts simultaneously and advocates a gradual build-up of the fleet and its afloat support elements to ensure that, in conjunction with the RAAF, this can be sustained against any force which could be deployed in our general area.
- Considers that the level of both the offensive and defensive capabilities of the RAN should be strengthened, in particular with a further increase in the number of new proposed replacement frigates and Offshore Patrol Vessels, noting the escort

The League:

- Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in Australia's defence capability including the required industrial infrastructure.
- While recognising budgetary constraints believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.



THE NAVY LEAGUE OF AUSTRALIA ANNUAL MARITIME AFFAIRS ESSAY COMPETITION



TOPICS

- 21st Century Naval Warfare
- Australian Naval History
- Australian Industrial Maritime Strategy

CATEGORIES

A first, second and third prize will be awarded in each of two categories:

Professional category, which covers Journalists, Defence Officials, Academics, Naval Personnel and previous contributors to *THE NAVY*; and **Non-Professional category**.

Essays should be 2,500-3,000 words in length and will be judged on accuracy, content and structure.

PRIZES

	1ST PLACE	2ND PLACE	3RD PLACE
Professional	\$1,000	\$500	\$250
Non-Professional	\$500	\$200	\$150

Essays should be submitted in Microsoft Word format on disk by;

Post to:

Navy League Essay Competition
Box 1719 GPO, SYDNEY NSW 2001

OR

Emailed to: editorthenavy@hotmail.com

Submissions should include the writer's name, address, telephone and email contacts, and the nominated entry category.

DEADLINE

Saturday 26 August 2017

Prize-winners announced in the January-March 2018 Issue of *THE NAVY*.



HATCH: USS ZUMWALT (DDG 1000) Commissioning ceremony North Locust Point Baltimore. US Navy photo.



DISPATCH: INS VIRAAT (ex-HMS HERMES (R12)) preparing for decommissioning in Mumbai. HT photo.