

# ISSUE 147 headmark

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***SM2 and Sea Control:  
A New Air Warfare  
Capability for the Royal  
Australian Navy***

***China's Aircraft  
Carrier: Implications for  
Southeast Asia***

***Pacific Partnership:  
Australia's Contribution  
and Benefits***

***Muscular Maritime  
China ?***



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# Contents

<i>SM2 and Sea Control: A New Air Warfare Capability for the Royal Australian Navy</i>	4
<i>China's Aircraft Carrier: Implications for Southeast Asia</i>	7
<i>Pacific Partnership: Australia's Contribution and Benefits</i>	9
<i>Muscular Maritime China ?</i>	16
<i>Japan's formidable new strike weapon of WWII – its aircraft carriers, and the Darwin raid</i>	19
<i>Britannia Royal Naval College Report</i>	33
<i>The Battle for the South China Sea – World War II, Today and into the future</i>	36
<i>Obituary: CAPT David John Ramsay</i>	42
<i>A Middling Power, What is the ADF meant to do, exactly?</i>	45
<i>United Kingdom: National Involvement in the Indian Ocean Region</i>	51
<i>World Naval Developments</i>	56
<i>Book Reviews</i>	60
<i>Visions from the Vault</i>	67
<i>Style Notes for Headmark</i>	69
<i>ANI Membership Application Form</i>	71

*Front page :  
AP-3C Orion  
operating in the  
Middle East Area of  
Operations passes  
HMAS Anzac during  
the last operational  
flight in the Middle  
East before returning  
home. As a farewell  
gesture the Orion  
dispensed flares as it  
heads for home.*

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# SM2 AND SEA CONTROL: A NEW AIR WARFARE CAPABILITY FOR THE ROYAL AUSTRALIAN NAVY

BY COMMODORE PETER LEAVY

In June 2011 *HMAS Sydney* conducted a series of missile firings on the US Navy's Pacific Missile Range Facility off the coast of Hawaii. A key aim was to prove that the upgraded Adelaide class frigates (FFG) could exploit the full capabilities of the SM2 Standard Missile after a major upgrade program that saw it replace the previous SM1 surface to air missile. A proven, contemporary surface to air missile capability is a core component of the surface force's ability to gain and exploit sea control. Without sea control, a maritime force will be unable to adequately protect sea lines of communication or conduct maritime power projection operations.

The SM2 missile is the mainstay of the US Navy's anti-air warfare system and will be the major weapon in the RAN's new Hobart class destroyers (DDG). It is a solid fuelled, tail controlled, supersonic surface to air missile designed to defeat the full range of aircraft and missile air threats. It is a very capable weapon, having a range of 90nm and speed of >Mach 3. However, it is only one variant in the Standard Missile family. Its predecessor, the SM1, was first test fired by the United States in 1966 and was introduced into the RAN Perth class DDG in the late-1970s. SM1 was the original weapon on the Adelaide class FFG and upgraded versions of the missile are still in service with a number of navies around the world. The SM3 variant is gaining prominence as the weapon used in the US ballistic missile defence system and SM6 is the next generation surface to air missile destined to replace the SM2.

The FFG are the first RAN ships to be modified to fire SM2. The missiles are fired from the same launcher



as were SM1 missiles, although modifications were required to the launcher to cater for the new missile interface and capability. The FFG class is in service with seven nations around the world, but the RAN is the first navy to attempt to integrate the SM2 into the class and the magnitude of this effort should not be underestimated.

*HMAS Melbourne* conducted the RAN's first SM2 firing in late 2009 against a surface target to prove the modifications made to the combat system and launcher. *HMAS Newcastle* conducted the second firing, and first against an air target, during Exercise RIMPAC off Hawaii in 2010. These first two firings were designed to prove the ships were capable of replicating the capability of the SM1 missile that was replaced, but at that stage the supporting software and associated systems to allow the full capability of SM2 to be used were still under development. The firings conducted by *Sydney* were an integral part of that development and tested a number of the high level features available in

the missile. To understand the large increase in capability the SM2 will give the RAN it is necessary to understand the differences between the SM1 and SM2 missiles.

The SM1 has a nominal range of 25nm, flies at Mach 2 and is a 'home all the way' semi-active missile.<sup>1</sup> In order to engage a target the ship must first illuminate it with a continuous radar wave (known as continuous wave illumination, or CWI). The missile is then fired and detects the reflected radar energy that is returning from the target. The SM1 missile homes on this reflected signal until it intercepts the target.

The continuous wave illumination required to guide the SM1 is transmitted from a dedicated fire control radar on the ship that must continue to point at the target throughout the missile's flight. The RAN's FFGs have two fire control radars for this purpose, so the ships

<sup>1</sup> A 'semi active' missile detects the return signal transmitted by the firing platform. An 'active' missile transmits its own radar signal and detects the returns.

*Able Seaman CSO  
Maxine Wilmott  
in the Operations  
Room of HMAS Perth  
monitoring the SM2  
launch*

were capable of engaging two air targets simultaneously. Should the SM1 missile lose reception of the CWI signal, the missile self destructs as there is no other method of homing onto the target.

The SM2 missile has a number of significant improvements over the SM1 including a greater range (90nm) and speed (>Mach 3). While it can be fired in the same 'home all the way' mode as SM1 it can also be fired without needing the CWI radar return to guide it until the terminal phase. In the FFG this is known as mid course guidance mode, where the missile initially flies autonomously towards a predicted intercept point (PIP) calculated by the ship's combat system immediately prior to launch. The ship continues to update the PIP based on changes to the target's movement after the SM2 is fired with an updated PIP being transmitted as necessary to the missile which then adjusts its flight accordingly. Once the missile gets close enough the ship's fire control radar commences transmitting the CWI signal for the missile to home on the target during the terminal phase of flight. Consequently the SM2 does not waste energy by unnecessarily manoeuvring early in its flight which increases both its overall range and its ability to manoeuvre heavily in the terminal phase of the engagement.

The mid course guidance mode has other advantages. CWI transmissions are easily detected by a target so once illumination commences, the target gains valuable warning time of an imminent threat. As the SM2 missile does not need to have the target continually illuminated with CWI for its entire flight, there are reduced warning queues for the target. In the current FFG configuration, there does need to be fire control radar support to track the target and provide the target's 3-Dimensional position for the PIP calculations. Not so with the new Hobart class DDG as its AEGIS combat

system will be able to track all targets in 3-Dimensions at all times. Using the SPY1D(V) radar (the primary radar fitted to the ships) as a tracking source, data is continuously sent to the SM2 in flight by the SPY radar as guidance commands, again without the target detecting that it has been engaged. AEGIS can manage multiple weapons at multiple targets at any one time, with the CWI illuminators time sharing illumination of the targets during the terminal phase of the engagement.

The trials Sydney conducted in Hawaii covered a number of key aspects of the SM2 missile system. The specific

details being explored and the results are classified, but were very promising. One firing was conducted in the 'home all the way' mode to prove that capability, while other firings explored various performance limits, system redundancies and operating modes, including firing at the edge of the designed operating limits. A number of firings were conducted where the target was deliberately manoeuvred after the missile was fired to ensure the ship's combat system could accurately monitor the PIP and send updates to the missile. There are also a number of key redundancies built into the

*HMAS Sydney  
launching a SM2  
missile on the Pacific  
Missile Range Facility  
off Hawaii*



## SM2 AND SEA CONTROL: A NEW AIR WARFARE CAPABILITY FOR THE ROYAL AUSTRALIAN NAVY

SM2 system and simulated faults were injected in some firings to test these redundant modes.

The results of these firings are now being used to refine the various software systems in the FFG with the final product to be delivered to all four ships shortly. Once this happens, the RAN will have a tested and proven anti-air warfare capability out to 90nm from the firing ship, which will fundamentally change the way the ADF conducts air warfare. The range at which hostile aircraft will feel threatened by ships has effectively increased from 25 to 90nm, significantly complicating their ability to detect and identify surface contacts while simultaneously reducing their own weapon performance. This is a tremendous advance in the RAN's current anti-air warfare capabilities; an advantage that will be further boosted once the Hobart class DDG enter service later this decade.

The RAN's SM2 capability will also greatly increase the operating area that friendly aircraft can operate in which provides a tremendous increase in the ADF's air warfare capability. For example, Airborne Early Warning and Control (AEW&C) aircraft can operate at some distance from the ships, whilst remaining under the protective umbrella provided by SM2. Indeed, the AEW&C aircraft will provide much of the cueing and targeting information for the ships' weapons to use; an excellent example of the whole being greater than the sum of the parts.

The combination of ships and aircraft working together to detect and identify air threats and then ships and combat aircraft being able to engage those threats will be a powerful force multiplier for the ADF. Knowing where a threat is situated is one thing – SM2 brings the capability to deal with those threats if necessary. The trials conducted by *Sydney* in June 2011 validated the very good work

undertaken by the RAN, the Defence Materiel Organisation and a number of Defence contractors to bring the full capabilities of the SM2 missile to the RAN.

The RAN is now well placed to provide significant air defence capability when and where it is needed and, in doing so, gain sea control in order to execute military missions. ➔

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Photograph © Australian Department of Defence

# China's Aircraft Carrier: Implications for Southeast Asia

BY KOH SWEET LEAN COLLIN

## Synopsis

The induction of China's first aircraft carrier by the People's Liberation Army Navy (PLAN) is no cause for overreaction by Southeast Asian governments, from the strategic and operational perspectives. Still, China's aircraft carrier programme may provide greater grounds for concern by 2020.

The induction into service of China's first aircraft carrier, the *Liaoning*, amidst ongoing tensions in the East and South China Seas, could not have been more coincidental. Inevitably this could provoke regional concerns in regard to whether China would use its newfound capability against competing claimants in those disputes.

This might be especially so for comparatively weaker countries in Southeast Asia which have viewed China's growing naval might over the past decade with at least some concern. However, should Southeast Asia be overly concerned about this development?

## Carrier in confined littorals

The accepted consensus amongst naval analysts is that building a full-fledged carrier capability takes time. More than just having the aircraft carrier, it involves providing supporting elements such as escorting warships and replenishment vessels, not to mention a fully-developed carrier-borne aviation complement, all of which constitute a typical carrier battle group (CBG).

A CBG is still not considered a fully-operational fighting force until the necessary doctrine and operational and technical knowhow of carrier operations are acquired, diffused and mustered throughout the entire CBG. The time taken for a whole



CBG to train to operate together as one cohesive fighting force can be considerably lengthy.

Moreover, the Southeast Asian maritime confines, characterised by narrow and semi-enclosed waters, do not favour the operation of large-sized carriers. A typical CBG presents a large and highly visible target with its accompanying fleet train, which increases its vulnerability to detection.

In confined littorals, large warships could be particularly vulnerable to well-concealed asymmetric countermeasures, exploiting local geography, such as submarines and long-range missiles. The encounters between US Navy carriers and PLAN submarines in 1994 and 2006 as well as the successful attack on the Israeli Navy corvette *INS Hanit* in 2006 by a Hezbollah shore-based anti-ship missile highlight such vulnerability.

## No surprise for regional governments

The Chinese carrier programme should not have come across as a surprise regionally. China's aircraft carrier

dream dated from the Kuomintang period in the 1940s and this was revived by the communist government in the 1980s. High-profile purchases of decommissioned Australian and Soviet medium-sized carriers in the mid-1980s and early-1990s exemplified Beijing's intent. This meant that over these decades, regional governments have at least been partially desensitized to the Chinese carrier prospect.

Since the 1990s, even if it does not constitute the primary motivation behind Southeast Asia's naval modernisation, China's aircraft carrier intent could have spurred regional acquisition of such 'cheaper' anticipatory countermeasures as long-range missiles, aerial maritime surveillance and submarines. These could have helped in mitigating the potential materialisation of China's aircraft carrier programme. In sum, Southeast Asia is generally prepared for such a contingency.

Therefore, China's first aircraft carrier should not warrant any overreaction on the part of Southeast Asian governments. However, China's

China's first Aircraft Carrier

## China's Aircraft Carrier: Implications for Southeast Asia

carrier programme may potentially present a real source of concern by 2020 when the two planned indigenous carriers, according to PLAN sources, are expected to enter service in 2020 and 2022 respectively. The indigenous carrier is reported to be based on but larger than the Varyag design, implying a vastly more capable vessel displacing more than 70,000 tonnes full-load.

One needs also to pay attention to Beijing's overall attempts to build up its CBG capacity. This is well exemplified by the recent induction and construction of new destroyers optimised for fleet air defence coverage, conceivably with CBG air defence in mind. This means that China is seriously bent on pursuing a long-term carrier capability which is more than just a prestige pet project.

### Benign aspect of aircraft carrier

Given that a full-fledged CBG capability for China will require more time to materialise, it is premature to strike the alarm bells; the actual use of a carrier is arguably more crucial than the mere possession of it. And it could have a benign impact as well.

Prior to the 2004 Indian Ocean tsunami for instance, Singapore's force of new Endurance-class amphibious landing ships projected a somewhat aggressive image but their humanitarian deployment off Aceh in the aftermath of the disaster aptly demonstrated that these otherwise offensive-looking platforms do have their benign aspect.

The Americans for instance deployed their carriers to good effect after the 2004 tsunami and the 2011 East Japan Sea tsunami. The Thai Navy used her 'pocket carrier' *RTNS Chakri Naruebet* for the southern floods disaster relief. The Chinese could take note of these instances and strive to utilise its future carrier capabilities

for such benign purposes. In fact, Beijing should be aware of the peaceful utility of such large naval platforms, as its hospital ship *Anwei* had demonstrated in its international goodwill voyages.

### Less glamorous power projection

If Southeast Asians are worried that the new carrier could be used to assert Beijing's maritime claims in the region, based on recent patterns of Chinese gunboat diplomacy, this worry could be exaggerated. China has been relying increasingly on lightly-equipped civilian law-enforcement vessels for such functions instead of PLAN warships and this trend is projected to continue as China rapidly builds up such capacities.

In times when its emergence as a great power has come under intense international scrutiny, the last thing Beijing would want is to be seen as overly aggressive by exploiting its newfound naval might. The deliberate low-profile induction of this first aircraft carrier is one such gesture of China's reluctance to be portrayed as using disproportionate force in its exercise of gunboat diplomacy.

Also, rather than an aircraft carrier in the South China Sea, greater efficacy and credibility can be achieved through 'less glamorous' power projection capabilities such as Beijing's rapidly expanding amphibious assault forces, or fourth-generation land-based airpower supported by mid-air refueling aircraft. That would provide more immediate ramifications to the regional naval balance. In the shorter term, these aspects instead of the



carrier programme deserve greater attention of China's Southeast Asian neighbours. ✎

*Top: Chinese aircraft carrier Liaoning cruises back to a port after its first navy sea trial in Dalian, in northeastern China's Liaoning province in late 2012*

*Chinese military on parade on board their new aircraft carrier*

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# PACIFIC PARTNERSHIP: AUSTRALIA'S CONTRIBUTION AND BENEFITS

BY RHETT MITCHELL

The public often thinks of navies in purely militaristic terms; they exist to defend their state at sea through force. However, navies also provide an important, but far less publicised form of defence through military diplomacy. By visiting other states on goodwill on humanitarian assistance/disaster relief (HADR) missions, navies can act as informal diplomats and generate soft power for their respective state. The benefits of soft power are significant. Soft power generates trust between states, which in turn increases security. Further, these missions give other benefits such as interoperability and extra experience for the participants. One such mission the Australian Defence Force (ADF) participates in is Operation Pacific Partnership.

Pacific Partnership is an annual diplomatic military operation designed

to provide free medical treatment, veterinary care and engineering support for developing states in the Asia-Pacific region. Led by the United States (US) Navy Pacific Fleet in San Diego, the overarching aim of Pacific Partnership is to maintain a secure and stable region while building relations between participating and host states. According to Tongan Minister of Education, Women's Affairs and Culture, the Hon Dr 'Ana Maui Taufe'ulungaki, programs such as Pacific Partnership demonstrate "to the Pacific and the world, that the defence services of the participating countries are there to protect the peace and security of the region, and to help improve and maintain the welfare of the people."<sup>1</sup>

Pacific Partnership evolved from the HADR response following the 2004 Boxing Day Indian Ocean Tsunami.

Since its inception until the end of Pacific Partnership 2011 (PP11), the operation has visited 15 states, treated approximately 348,000 patients, and completed 130 engineering projects.<sup>2</sup> For example, PP10 treated 109,754 patients, performed 859 surgeries, distributed over 60,000 pairs of glasses and sunglasses, provided 1505 dental treatments and repaired 124 pieces of medical equipment valued at approximately US\$5.8 million.<sup>3</sup> Its success has also inspired other states. China, for example, implemented a similar operation, Harmonious Mission, in the Indian Ocean region commencing in 2010.<sup>4</sup>

Pacific Partnership improves both the perception and reputation of participating states. Following PP06, a survey undertaken by research organisation Terror Free Tomorrow in Indonesia and Bangladesh showed

*USNS Mercy  
(US Navy)*



## PACIFIC PARTNERSHIP: AUSTRALIA'S CONTRIBUTION AND BENEFITS

85% of Indonesians and 95% of Bangladeshis supported the mission.<sup>5</sup> Further, 87% of Bangladeshis said the mission improved their perceptions of the US, with general positive US perceptions doubling. Support for terrorism and Osama bin Laden in Indonesia dropped to 12% from a high of 58% in 2003.<sup>6</sup> While Pacific Partnership cannot claim sole responsibility for diminishing terrorist support, continued humanitarian assistance in Indonesia following the Boxing Day Tsunami witnessed a drop in support by 25%.

Pacific Partnership projects are undertaken at the request of the host state, enabling the participating states to provide the right resources for the projects requested. For PP11, Tonga requested, amongst other things, help refurbishing local schools, including installing solar power, water tanks and play equipment. These projects were undertaken with the help of the local community. Tongan Prime Minister, Lord Tu'i vakano, expressed his gratitude, saying:

I am pleased to note this year's inter-governmental approach where the impact and benefit has been widened by working closely and in tandem with the New Zealand and Australian governments. I am sure this will form the foundations and perhaps a model for future humanitarian missions that draw together and unite different parties to achieve a set of clearly defined goals.<sup>7</sup>

One of the other benefits of Pacific Partnership is that it works with local communities, educating and training them in professional exchanges and community conferences. Community conferences cover topics such as natural disaster response, and give an opportunity for the community to say what they want from future missions. Further, participants work alongside

local civilians and military, helping build rapport with the host states, as well as showing new techniques for tasks such as civilian/infrastructure construction, medical treatment and military logistics.

Cultural exchanges and community relations between host and participating states are just as important as the medical and construction work. Cultural exchanges enable the participating and host states to experience and understand more about each other's culture. This improves cultural awareness and allows all sides to influence the perceptions of each other.

For PP09, a new way of conducting cultural exchanges emerged. Instead of small-scale interaction through work, dedicated events were organised to interact with locals, particularly schoolchildren. The Pacific Fleet Band and US Navy helicopters proved popular, as they allowed the children to sing, dance and tour the helicopter. Personnel distributed toys donated by non-government organisations (NGO's), which the children also enjoyed. This allows the participants to interact with a larger part of the community than before.

### US INVOLVEMENT

Though organised and led by the US Navy, Pacific Partnership is supported by states with an interest in the Asia-Pacific region as well as NGO's such as Rotary International and Project HOPE (an international healthcare organisation). For example, eight



NGO's and military representations from five states (including the US), supported PP11.

The command ship for Pacific Partnership alternates each year between *USNS Mercy* (a 'white hulled' hospital ship) and a 'grey-hulled' ship, usually a transport/supply ship (for PP11, the amphibious transport dock *USS Cleveland* was the command ship). While grey-hulled ships are not hospital ships, they have the capacity to carry large amounts of medical equipment and have a dedicated medical clinic on board. By alternating between *Mercy* and a grey-hulled ship, the focus of the mission alternates between medical treatment and engineering projects from year to year.

The 1000-bed *Mercy* has a history in the region, further enhancing the goodwill the mission receives. *Mercy* first deployed on a humanitarian mission in the region in 1987, and

*The Australian contingent for PP12 in front of USNS Mercy (RAN photo)*

was involved in the HADR response following the Boxing Day tsunami.

According to the US Navy, the primary purpose of Pacific Partnership is to:

- strengthen relationships with host/partner states and NGO's,
- build partner capacity to conduct peace, stability and consequence management operations,
- improve host/partner state HADR capacity, and
- improve security cooperation among partner states.<sup>8</sup>

Other benefits for the US Navy include; knowing what the emergency response structure and facilities in the affected states and what HADR priorities in those states will be if there is a natural disaster in the region; HADR training; regional awareness, and relationship building with participating and host states. The US Navy also recognises the benefits of working with partner governments, militaries and NGO's, and seeks to continue to strengthen these relationships.

## REASONS FOR ONGOING PACIFIC PARTNERSHIP MISSIONS

### *Soft power and diplomacy*

Soft power diplomacy is important for modern states. Soft power is the ability of one state to influence the actions of another through persuasion or attraction, rather than through hard power measures such as threats, sanctions or violence. As leading soft power scholar Joseph Nye surmises, "If I can get you to do what I want, then I do not have to force you to do what you do *not* want."<sup>9</sup> Providing medical

care, building infrastructure and working with locals can be just as, if not more, effective in creating security than militarily defeating an enemy.

Soft power is created by the attractiveness of a state's culture, political ideals and policies; it spreads through a state's actions and decisions, validates and reinforces the state's common values, beliefs and lifestyles.<sup>10</sup> From an Australian perspective, with limited hard power options, soft power is vital for securing Australian regional interests, such as trade, resources, and sea lines of communication. Australia projects soft power in numerous ways, such as student and cultural exchanges, film and television broadcasts, and government and NGO's such as AusAID or World Vision. One of the ways the Australian Defence Force (ADF) projects soft power is through Pacific Partnership.

## AUSTRALIAN INTERESTS

Pacific Partnership helps promote Australian national and strategic interests by building and maintaining positive relationship with regional

states. Neither national interests (for example national security) nor strategic interests, such as regional security, can be promoted successfully without positive relations with neighbouring states. By building and maintaining positive relations through operations such as Pacific Partnership, Australia is more likely to be able to positively influence the region.

Positive working relationships increase Australia's national security, as friendly states are less likely to attack each other. Positive working relationships build trust. Trust between states, particularly militaries, is integral as it allays fears that Australia is a negative regional influence and sends the message that Australia's military intent is benign. HADR missions are effective ways to build trust between states.

Trust is also important in creating avenues for future cooperation and trade between states. From an ADF perspective, working with regional militaries allows them to understand how other militaries operate, what their capabilities are, and what role

*US Navy aircrewmen comfort an injured Nicaraguan woman prior to take-off during a medical evacuation (US Navy)*



## PACIFIC PARTNERSHIP: AUSTRALIA'S CONTRIBUTION AND BENEFITS



*Army vehicles sit  
in the tank deck  
onboard HMAS  
Tobruk  
(Navy image)*

they play in their states' political/societal structure. Understanding these elements allows the ADF and Australian Government to work more effectively with regional governments, mutually increasing regional security.

When people are healthy and have basic infrastructure, they are less likely to rebel against the government, potentially creating failed states, destabilising the region. Increased regional stability means there is less likelihood that Australia will have to deploy the ADF within the region as a stabilising force.

Security is more than just defending against an armed attack. Non-traditional security threats, such as natural disasters, terrorism and public health epidemics are now core security considerations. Pacific Partnership is not designed to prevent an armed attack, but it is designed to improve public health, infrastructure and disaster response capabilities. Improving these capabilities increases the stability of regional states, and therefore the region as a whole, with

a stable region being a key Australian strategic interest.

ADF participation in Pacific Partnership supports the 2009 White Paper objectives. The White Paper outlines that as a prosperous state, Australia should help other states, particularly in the Asia-Pacific region, and that the ADF provides specialised capabilities on a scale that no other Australian Government agency can supply.<sup>11</sup> As the White Paper further mentions, Australia has a strong interest in ensuring the stability and prosperity of states in the region.

With other states vying for regional influence and exerting their own soft power, it is in Australia's interests to maintain a positive regional relationship. This is one of Australia's key strategic interests as outlined in the White Paper. A positive regional relationship means there is less likelihood another state can influence the region negatively, against Australia's national interests.

Australian regional policy reflects the region's geostrategic and

economical realities. While parts of Asia are becoming increasingly wealthy, many Pacific states remain poor. In the 2010/11 financial year, Australia contributed about \$1.1 billion in aid to Pacific states, representing 25% of Australia's total aid budget, and half of the total aid given to those states globally.<sup>12</sup> Providing aid, both financially and materially, Australia promotes itself as a good neighbour who cares about the interests of its neighbouring states.

Australia's motivation for participating in Pacific Partnership is multi-faceted. Firstly, it has a purely altruistic element; the Australian Government wants to help the region achieve higher standards of living. Secondly, it provides an important HADR and interoperability training opportunity for ADF personnel. Thirdly, it develops regional security. Fourth, it builds relationships between Australia and the participating and host states, and finally, it helps promote Australia's national interests abroad.

HADR operations such as Pacific

Partnership form part of Australia's larger diplomatic efforts. While HADR missions are not traditional diplomacy (that is, diplomat to diplomat), they form part of Australia's larger public diplomacy mission. Public diplomacy is whereby one state directly influences the citizens of other states to shape their opinions, perceptions and attitudes in a way that will serve the home state's foreign policy interests. Culture, education, trade and citizen-to-citizen interaction are all part of creating effective public diplomacy.

Effective public diplomacy contributes to national security. According to the Department of Foreign Affairs and Trade's *Public Diplomacy Handbook*, public diplomacy "contributes to [Australia's] national security by helping to build understanding about Australia and its place in the world as a stable, sophisticated, tolerant and culturally diverse nation." These traits are all aspects of soft power projection, making public diplomacy a practical application of soft power.

However, Pacific Partnership is not a pure public diplomacy exercise as it incorporates aspects of military diplomacy (military-to-military/civilian interaction) and medical diplomacy (medical aid). The culmination of these three types of diplomacy enables Pacific Partnership to influence a broad spectrum of society. This provides great benefits to Australia and the ADF.

## ADF CONTRIBUTION AND BENEFITS

The importance of Pacific Partnership to the ADF continues to grow. Up until PP08, the ADF contingent was a small number of medical officers and combat engineers. Since PP09, two landing craft heavy (LCH) amphibious ships have been sent to transport equipment such as medical and building supplies. The Australian contingent is now

larger, with over 300 participants for PP10. This demonstrates the level of importance the ADF now places on the mission.

The LCH's play a vital role in the mission. Due to their shallow draft and large cargo capacity, the LCH's are the perfect vessels to move personnel and supplies between the ships and shore. They can also access areas that larger ships cannot, extending Pacific Partnership's reach beyond towns with large ports. During PP10, HMA Ships *Labuan* and *Tarakan* became floating staging bases for medical and dental teams. Embarking an extra 21 personnel each (who slept on the open vehicle deck under mosquito netting), the LCH's landed the teams in the morning and picked them up at night from remote towns and islands inaccessible to larger vessels.

This allowed an estimated 13,000 extra patients to be treated.<sup>13</sup>

For PP10, the Landing Ship Heavy *HMAS Tobruk* participated, greatly enhancing the amount of supplies the RAN could transport. *Tobruk* also received the honour of being the first non-US command ship for Pacific Partnership when Captain Lisa Franchetti, USN, based herself aboard *Tobruk* for the final leg between Darwin and Rabaul, Papua New Guinea.

The ADF has participated in Pacific Partnership since 2006, providing RAN vessels, ADF medical personnel and combat engineers. Pacific Partnership provides the ADF with benefits such as,

- interoperability with the US Navy

and other participating/host states (such as New Zealand, Japan, Papua New Guinea, East Timor),

- experience for ADF medical/dental/veterinary and engineering personnel both in the region and in general,
- experience in HADR missions, and
- strengthening relations with neighbouring states through public diplomacy.

The commander of the Australian contingent for PP11, Commander Ashley Papp, RAN, said that the Pacific Partnership's benefits to the ADF are improved interoperability with host/participating states and improving the lives of people in the region. Further, Commander Papp added, "Working closely with friends and allies in this

*Nursing officer Lieutenant Sarah Jarvis with local children on the Indonesian island of Siau during PP12 (RAN photo)*



## PACIFIC PARTNERSHIP: AUSTRALIA'S CONTRIBUTION AND BENEFITS

way in times of peace helps us to refine our procedures, understanding and cooperation, so that in times of crises we have already trained on how to deliver the right support, at the right time, in the right way when needed.”<sup>14</sup>

Pacific Partnership 2012 ran from May to August with *Mercy* as command ship, visiting Indonesia, the Philippines, Vietnam and Cambodia. Twenty four NGO's and 16 militaries (including host states) participated in PP12, including first time states Chile, Peru and the Netherlands. By the end of the third leg (Vietnam), there had been about 24,600 patients seen, including 680 surgeries; 7000 pairs of prescription glasses distributed; 4600 animals (mostly livestock) treated; 174 pieces of medical equipment repaired; 50 community service events; 43 band performances; 30 subject matter experts exchanges; and eight engineering projects undertaken. Australia's contingent is smaller than previous years, with 41 personnel participating, but the ADF contingent is still one of the largest of all participating states.

The large number of participating states and NGO's demonstrates that more states recognise the goodwill and soft power Pacific Partnership generates. The fact that all four host states have had Pacific Partnership visits previously shows that Pacific Partnership achieves positive results and that they benefit from work undertaken.

Pacific Partnership demonstrates the positive work that militaries achieve in public diplomacy and soft power projection. Australian participation in HADR missions improve positive perception of Australia, demonstrates that the Australian Government and ADF want to support the region, and that Australia is a positive regional influence with benign military intent. Professor Phillip Siaguru, Vice

Chancellor of the University of Natural Resources and Environment in Papua New Guinea best surmised Pacific Partnerships importance when he said Pacific Partnership:

*has changed my childhood impression of soldiers and armies, and I am sure many others of my age or older...who also had the impressions that soldiers cannot take up saws and hammers or needles and medicines...only guns. [These efforts] will leave a lasting impression on East New Britain, certainly this University and me personally.*<sup>15</sup>

This is the reason why soft power is important and why ADF contribution to Pacific Partnership is vital to promoting Australia's interests. 🚀



*Rhett Mitchell graduated from the University of Notre Dame-Fremantle, in 2009 with a BA (Hons.) majoring in History, Politics and Archaeology. He joined the Department of Defence as a graduate in 2010, before becoming a researcher at the Sea Power Centre-Australia. His research interests include Australian and American history, and maritime strategic affairs.*

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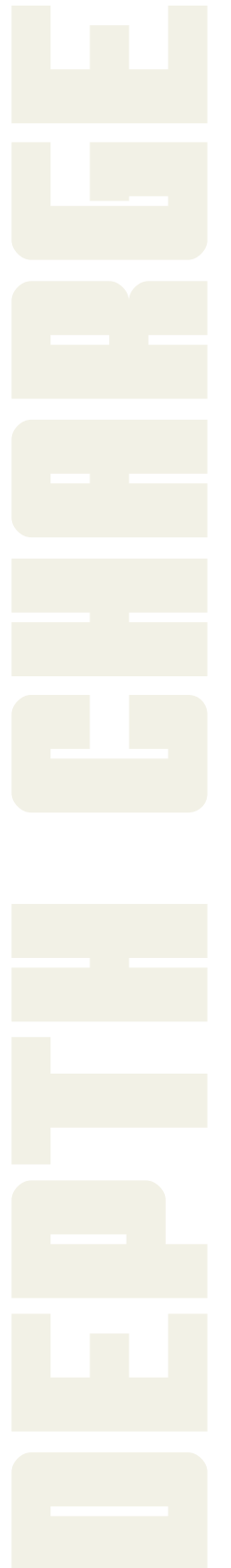
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Image: Eye in the Sky

# Muscular Maritime China ?

By **DEPTH CHARGE**



**U**nder new rules to come into effect on 1 January 2013, China has announced that it plans to send Hainan Provincial police to board and search ships which are acting 'illegally' in its territorial waters, including those which are in dispute. Acting 'illegally' may in practice mean that any foreign flagged vessel in Chinese territorial and disputed waters can be stopped, boarded and searched and escorted out to the high seas or detained.

The pronouncement appears to foreshadow an intention by the PLAN to board and search foreign vessels in what the owners of the ships and their flag state may consider to be their territorial waters. This action would be a direct affront to regional governments that would require a response. One of the actions deemed illegal by Beijing under the new regulations will be 'conducting acts of propaganda that threaten national security'. That means whatever Beijing says it means! Clearly the right of innocent passage through such disputed waters will not be respected either. The Chinese Ministry of Foreign Affairs spokesman Hong Lei declined to elaborate at a press briefing on what might constitute illegal entry.

How significant is this edict? China's maritime neighbours are certainly not happy. Surin Pitsuwan, the Secretary General of ASEAN, has called this 'a very serious turn of events', diplomatic code for an unacceptable arrogation of new powers to determine behaviour at sea by Beijing and a challenge to all states disputing China's version of who owns what features. What is behind China's determination to challenge the international agreements which govern

the laws of innocent passage through a nation's territorial waters? Is this just the normal behaviour to be expected of a rising seapower moving through the spectrum from Brown to Green to Blue water naval capability?

Perhaps this is the case. But there may be a more complicated, deeply seated and historically ambiguous relationship between Beijing and the South China Sea which might help to explain the subtext to this recent chest beating and determination to be recognised as the Asian arbiter at sea. It is not just about who gets what maritime resources in the twenty first century, though that is a part of the rationale for action. It may also be about how China was treated by the seapowers of the nineteenth and twentieth centuries.

China under successive dynasties feared that invasion by barbarians would come from the east over the endless plains of central Asia. Indeed in 1276 the Mongols came from the East and became the Chinese ruling dynasty. Centuries of wall building and repair attest to this persistent fear that new barbarians were just over the border. Of course it was true. There were barbarians waiting their opportunity to invade. But the ones who would determine China's fate in the modern era were not over Mongolian land border they were over the maritime horizon. They were despised nations developing technology and firepower that massively outstripped the capacity of pre industrial China to match.

It was from the sea that the European and American barbarians came to 'humiliate' China in the nineteenth century. Later it was the troops of the great new Asian seapower

Imperial Japan which penetrated China from the north and raped its way south in the 1930's causing tens of millions of deaths and the destruction of a way of life that generations of Chinese had built over three millennia.

Having myopically ignored the sea and the development of naval power since the early fifteenth century, the last emperors of the Middle Kingdom were helpless to prevent the destruction of the Manchu dynasty's rigid social order by foreign merchants and missionaries. Nor could they prevent the carving out of spheres of influence by the great powers of the West. The invaders ships crossed uncontested the waters that China considered came under its historic suzerainty. They imposed trade conditions on the weakened and debauched Imperial government's mandarins in Peking. When resistance was offered in 1860 the Imperial summer palace was looted and burned and Peking occupied. Popular uprisings were crushed by the west with relative ease as it sailed into China's ports troops and firepower to meet the challenge. It was the sea which ultimately was the author of this massive loss of Chinese life, wealth and prestige.

Treaties lowering tariffs and demanding concessions, including the right to navigate the Yangtze, were won from a bitterly resentful but powerless Chinese emperor. Even the infant Australia was involved in this dubious occupation when *HMCS Protector* sailed to China to be part of the suppression of the Boxer rebellion in 1900. It did not take a Chinese Mahan to work out that the origin of China's misery and destruction lay in her failure to keep pace technologically

with the West and to apply the new industrial skills to building a Navy which could command the waters off her long open coastline.

From the 1890s onwards Japan built a modern battle fleet, with the help of the British, and prepared for the new century with confidence. China had neither the resources or the knowledge or the freedom to become a naval power. That made all the difference to these two Asian powers' relative fates in the first half of the twentieth century. The lesson was learned and Mao began the process of building and buying a fleet from Moscow. The project to modernise and enlarge the PLAN is never ending for China.

Why is all this history relevant to the first half of the 21st century and China's recent pronouncement? The men who rule China today know that the capacity of the ruling Communist Party to retain the 'mandate of heaven', and continue single party rule indefinitely, depends on the willing participation of the mass of the Chinese people in the bold experiment that is the rise of China. They are riding the tiger! The Chinese masses must observe and participate in this new age where the humiliations of the past are now impossible.

Bullying of Beijing, or the perception of it, must stop and ultimately one suspects obeisance by smaller powers must recommence after an unnatural interruption of half a millennium. With this recrudescence of hope and self belief in the public mind go certain facts about how the future will be for the Chinese people.

Most Chinese believe passionately that Taiwan is a temporarily detached 'renegade province' of the motherland which must be returned to central authority one way or another. This should occur peacefully if possible and by force if necessary. They believe intuitively that all the seas around

China as far as the territorial waters of the rest of South East Asia's maritime states were once, and therefore should be again, under Chinese control. They are not in the least interested in the arcane rulings of the International Tribunal for the Law of the Sea (ITLOS) in Hamburg or the principles of Law of the Sea Convention 1982.

In fact China stated when it ratified UNCLOS that it will not accept compulsory arbitration of its maritime disputes. It has the right to do this under UNCLOS and is not the only country to make this declaration. That opt out entitlement does not prevent the flag state of a seized vessel from bringing a claim against China and that may well happen if China enforces its claims.

In summary the people to whom the Communist Party must be responsive are not interested in the rights of Japan, the Philippines, Malaysia, Indonesia or Vietnam to assert their historical claims to maritime features which would give them fishing and mineral rights. Such assertions are regarded as attempts at humiliation of the motherland. The average Chinese wants to hear that the Japanese, still resented for their wartime cruelty and their twisting of modern history, are the ones being humiliated over their claims to these 'Chinese' islands. The logic presumably is: something must be done to assert China's new found strength with regard to perceived Japanese hegemonic claims. This is something, therefore it must be done! The forced closure of Japanese company's car plants in China by furious workers was apparently a spontaneous expression of real anger over Japanese claims.

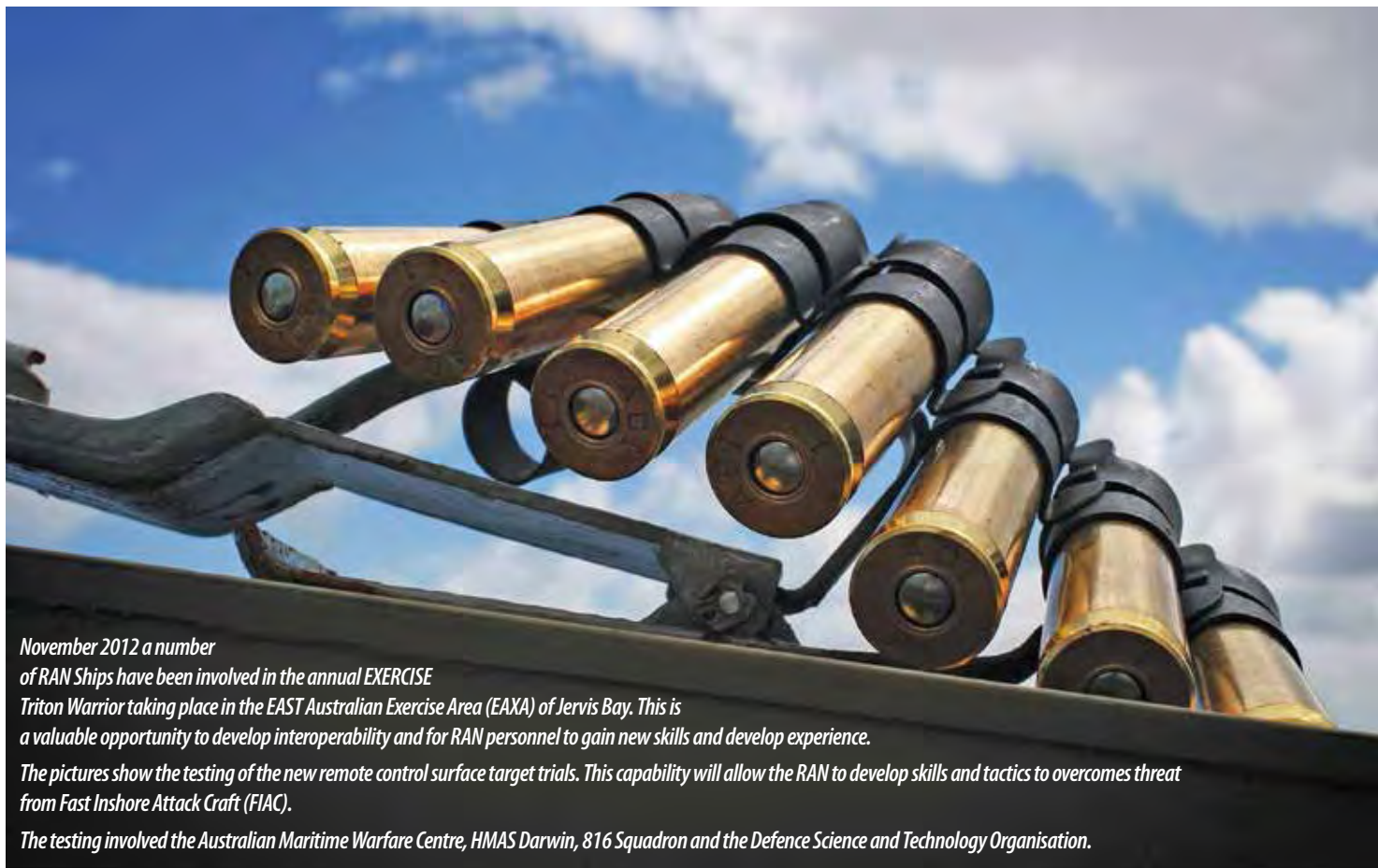
These facts about how the future is going to be, which are believed by the Chinese proletariat and the ruling elite, are, for the foreseeable future, immutable. The West needs

to accommodate itself to the fact that pronouncements will be made by Beijing principally for internal consumption. Is the pronouncement on boarding vessels in territorial waters just such a banner waving action intended to allay popular fears that China is being outpaced at sea, or is it China's real intent to follow up the words with deeds at sea? Time will tell.

Standing behind the smaller ASEAN maritime powers and Japan is the United States which does not wish to find itself watching a shooting match between the PLAN and vessels of its regional allies. Time will tell whether Beijing really intends to metaphorically poke a chopstick in the eye of the American eagle by attempting to enforce its claimed entitlements to stop and search the vessels of friends of the United States.

The young United States Congress sent its tiny Navy to war with the Royal Navy in 1812 over Britain's demand to search US-flagged ships on the High Seas seeking wartime contraband and British born sailors. Perhaps that bit of naval history needs to be pointed out to the more ambitious of the muscular maritime converts in the Chinese Politburo before more ambit claims are made which enrage the neighbours and cause friction with the regional maritime superpower whose Seventh fleet still patrols the waters China persists in claiming as exclusively its own. 🇺🇸

*"DEPTH CHARGE" SUBMITS HIS WORK ANONYMOUSLY TO THE EDITOR.*



*76mm gun after firing, during EXERCISE Triton Warrior, HMAS Darwin.*



# JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

BY DR TOM LEWIS AND PETER INGMAN

Japan deployed four of its aircraft carriers against Darwin in 1942. This was no “air raid” as such: the Imperial Japanese Navy had a new “wonder weapon” at its disposal and used it accordingly. The end result was an overwhelming tactical victory for the new empire of the Pacific.

The Imperial Japanese Navy took their different types of carrier and welded them into a formidable force that operated as one. This will be discussed later, but its effect was to shape a formidable force that could overwhelm whatever target its admiral chose it to destroy.

*Soryu* and *Hiryu* were of the same class, named after the former. Although

nominally the same, they were quite different in fine detail. *Soryu* was completed first, in 1937. She was the smaller of the two: her sister ship was completed two years later and was 1.5 thousand tons bigger: at 20,250 tons compared to *Soryu*'s 18,880. *Hiryu* was nearly four foot wider (about 1.2 metres).

While both ships carried a crew of 1100, and were capable of 34 knots, *Hiryu* carried two more aircraft: 73 opposed to 71. It might be supposed



then that *Hiryu* was in every respect a better ship, but there was one noticeable difference: the newer vessel had her island superstructure based on the port (left) side of the ship. The rationale behind this is discussed a little later.

The Japanese carriers were generally speaking at the forefront of the marque's latest ideas, but they were not perfect. Naval historian David Hobbs points out: “A major Japanese weakness was the need to strike aircraft down into the hangar to be refueled and rearmed, a time-consuming process in which the operating speed of the lifts was a critical factor that was to prove disastrous at the battle of Midway...”<sup>1</sup>

The aircraft hangars below the main, or weather, deck were serviced by lifts, which descended to the hangar, or further down to a second hangar, to bring up and down the aircraft, the carrier's fighting weapon. The lifts were complex pieces of machinery, able to carry several tons of aircraft, equipment, and people at a time. Their operation was vital to the carrier's operation of aircraft, for if they jammed or became battle damaged, aircraft would be stranded above and below until repairs were effected. Generally

1940 naval review aerial view (front to back and left to right) *Tone, Settsu, Mizuho, and Isuzu*. *Ships of the World* magazine No. 40, December, 1960-1.

## **AKAGI** (Carrier Division One)

Name translation: “Red Castle”

Year Completed: 1927

Displacement: 41,300 tons

Dimensions: 855'3" x 102'9" x 28'7"

Speed: 31 knots

Armament:

10 (later 8) x 8"/50 Type I

12 x 4.7"/45

28 x 25mm/60

91 aircraft

Crew: 2000

Source Nihon Kaigun

## **KAGA** (Carrier Division One)

Name translation: named after a province, rather like a state

Year Completed: 1928

Displacement: 42,541 tons

Dimensions: 812'6" x 106'8" x 31'1"

Speed: 28 knots

Armament:

10 x 8"/50 Type I

16 x 5"/40

22 x 25mm/60

90 aircraft

Crew: 2016

Source Nihon Kaigun

## **SORYU** (Carrier Division Two)

Name translation: “A Dragon Blue As The Deep Ocean”

Year Completed: 1937

Displacement: 18,880 tons

Dimensions: 746'5" x 69'11" x 25'0"

Speed: 34 knots

Armament:

12 x 5"/40

28 x 25mm/60

71 aircraft

Crew: 1100

Source Nihon Kaigun

## **HIRYU** (Carrier Division Two)

Name translation: “Flying Dragon”

Year Completed: 1939

Displacement: 20,250 tons

Dimensions: 745'11" x 73'3" x 25'9"

Speed: 34 knots

Armament:

12 x 5"/40

31 x 25mm/60

73 aircraft

Crew: 1100

Source Nihon Kaigun

## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

speaking, the hangars were aft at the stern or amidships in the middle of the vessel, with the bow area designated for aircraft takeoffs, which were most likely carried out without the later inventions of catapults and certainly without ski jumps. Aircraft could also be stored along the sides of the carrier for a short period.<sup>1</sup>

### Construction and performance

The lengthiest carrier in the Japanese force, at 855 feet (261 metres) *Akagi* was longer than a soccer field – 130 yards / 119 metres – and comparatively massive in breadth and displacement, roughly equivalent to the larger USA carriers. Like many aircraft carriers in the world at that time, she was a hybrid ship, a carrier deck built on battlecruiser or battleship lines; in *Akagi's* case the former. Oddly, she was originally heavily armed with guns, the main armament of carriers being their aircraft; a leftover from her early planning as a conventional line of battle vessel. Even at Midway it would seem she possessed six or eight eight-inch guns.<sup>2</sup>

*Kaga's* main problem when in company with the other three carriers of the Darwin group was her lesser speed: 28 knots making her the slowest

of the four: the others' being 31 knots for the flagship *Akagi*, and 34 for the two smaller ships *Soryu* and *Hiryu*. In a line of advance the entire strike force would be limited to *Kaga's* speed so as to retain cohesion within the protective force of cruisers and destroyers.

Steaming into the wind was a necessary operation for carriers launching or recovering aircraft: it effectively gave 28 knots (or whatever speed the carrier could make) under the wings of the aircraft launching, therefore meaning they were already "flying" at that speed, and so much closer to the speed needed for liftoff. On landing, the wind on the aircraft's nose effectively meant there was already a brake on the aircraft's landing. *Kaga's* lesser ability here meant her aircraft were at a disadvantage compared to the other carriers: that three knots when compared to *Akagi* and the six knots lesser speed for *Soryu* and *Hiryu* meant that the *Kaga* aircraft could not be so heavily loaded with fuel and bombs.

Having said that, *Kaga* was a worthy ship. She was some 40 feet shorter than the flagship but displaced 1,300 tons more. She carried one less aircraft: 90 as opposed to 91. The two smaller carriers *Soryu* and *Hiryu* operated 71 and 73 respectively.

The two smaller carriers showed the results of around a further decade of thinking relating to carrier design. Completed in the late 1930s as opposed to the 1920s, they were faster; more efficient<sup>3</sup> in their power delivery than their bigger sisters – so using less fuel – and in *Soryu's* case more graceful; she was a purpose-designed carrier from the keel to the island superstructure.

*Akagi* and *Hiryu* both – most notably and oddly – had their islands placed to the port, or left, side of the ship. This was related to the constant experimenting which was being carried on in the carrier world at the time

of construction. In fact, exactly how an aircraft carrier's vitals should be arranged would occupy designer for decades more to come.<sup>3</sup>

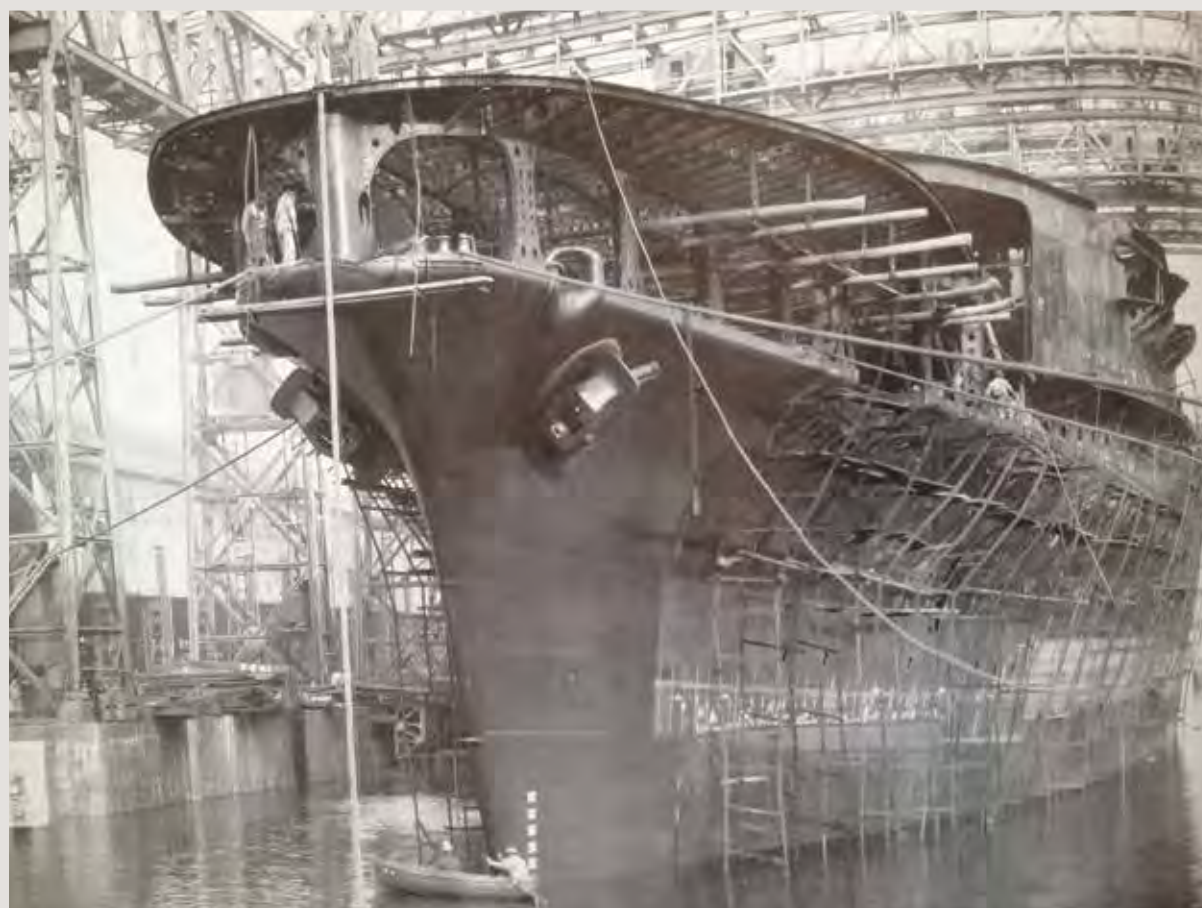
Sources differ as to the reasoning for the placement: one<sup>4</sup> suggesting it was "an experiment in determining whether this characteristic would improve flight patterns when operating a mixed task force of port-sided and starboard-sided carriers." Another<sup>5</sup> states that the rationale was as the result of 1930s design studies which showed that "turbulence over the flight deck aft (which affected aircraft during landing) could be reduced by moving the island away from the ship's exhaust gases." Yet another<sup>3</sup> suggests: "the island was placed on the starboard side because early (propeller) aircraft turned to the left more easily (an effect of engine torque). Obviously such an aircraft can execute a wave-off to the left more easily, so the island was put to starboard to be out of the way. Another idea<sup>6</sup> was to allow two carriers to operate extremely closely; the left and right islands of a pair allowing maximum visibility as they steamed alongside, but there is no evidence of this from Japanese archives so far.

*Akagi* even had a downward-pointing main funnel on the starboard side, showing the type of experiments that had been undertaken to control the flow of heated air and how it might

<sup>3</sup> Haze Gray & Underway suggests: "Initially the island was placed on the starboard side because early (propeller) aircraft turned to the left more easily (an effect of engine torque). Obviously such an aircraft can execute a wave-off to the left more easily, so the island was put to starboard to be out of the way....Once the starboard side position was established and a few carriers were built in that configuration, it became difficult to change. Pilots used to landing with the island to their right would be confused on a ship with the island on the other side. There was nothing to be gained by moving the island, so it stayed in the same place. Once angled decks were introduced this became even more important, since the deck angle would have to be changed to move the island." See <http://www.hazegray.org/faq/smn5.htm>

<sup>1</sup> The Japanese carriers had wooden planking decks over a lattice of steel beams, like the US Navy's vessels, as opposed to British ships, which had an all-steel deck construction. The Americans would pay dearly for this when kamikazes targeted the "flat-tops" in the later stages of the war: the wooden decks were a lot more vulnerable to impact than steel plates. The Americans and British, the operators of large carrier forces in the Pacific, never developed this interesting suicide technique whereby a pilot sacrificed his life for the devastating impact an aircraft crashing into a ship could achieve. Ultimately however, it did not stop the Allied advance. (Reference discussions between author Lewis and David Hobbs.)

<sup>2</sup> *Nihon Kaigun* suggests ten 8-inch guns, later to become eight; while *Shattered Sword* gives only six. (p. 7) *Akagi* was completed in 1927, after a stop in her construction to change her from a battlecruiser to an aircraft carrier. She was refitted in 1935 when it would seem she was made more "carrier-like" and it would have made sense to get rid of some guns then to save weight.



*A Japanese carrier under construction (Simon Loveday)*

affect aircraft performance. Whatever the rationale, these two ships, despite their different class and ten years of thinking inbetween their construction, spent their lives with their islands to the left. At least their pilots could not get confused and land on the sister ships *Kaga* and *Soryu*... landing on the wrong deck indeed something that has indeed happened in the tremendously intricate world of carrier operations. *Akagi* and *Hiryu* remain the only two carriers in the history of the marque to have islands to port. But once the starboard side position was established and a few carriers were built in that configuration, it became difficult to change.”<sup>7</sup>

### **Carrier defences**

Ironically, the biggest threat to the safety of a carrier by the end of 1941 was aircraft – other people’s coming your way armed with hostile intent. It was becoming obvious that the

enormous range of aircraft, compared to ships, meant that they could fly long distances and then attack shipping. The big guns of the carrier’s force (and in some cases, the carrier also had large anti-ship guns fitted) were ill-suited to anti-aircraft fire, lacking often elevation to fire upwards to a sufficient height; reload speed necessary to engage a fast moving aerial target, and accuracy – the solid shell even deflected forward of the target accurately being too small in its frontal area to achieve sufficient hits; something like a shotgun spread seemed a better alternative.

Consequently during WWII anti-aircraft defences sprouted from carrier and escort ships like quills from porcupines. They consisted of two main types: quick-firing, small, fast projectiles; and machineguns, preferably of a heavy enough calibre to make a sufficient hole in whatever they hit. While aircraft were sometimes too thin-skinned to withstand such

hits often the projectile passed straight through the aircraft’s side; and out of the other, not making enough damage to bring down the craft. Many a pilot survived combat in WWI and II bringing home an aircraft shredded with hits, but still flying. Pilots found quickly that armouring themselves – with backseat-armour for example – was a most useful measure to keep the machine under control from a live pilot.

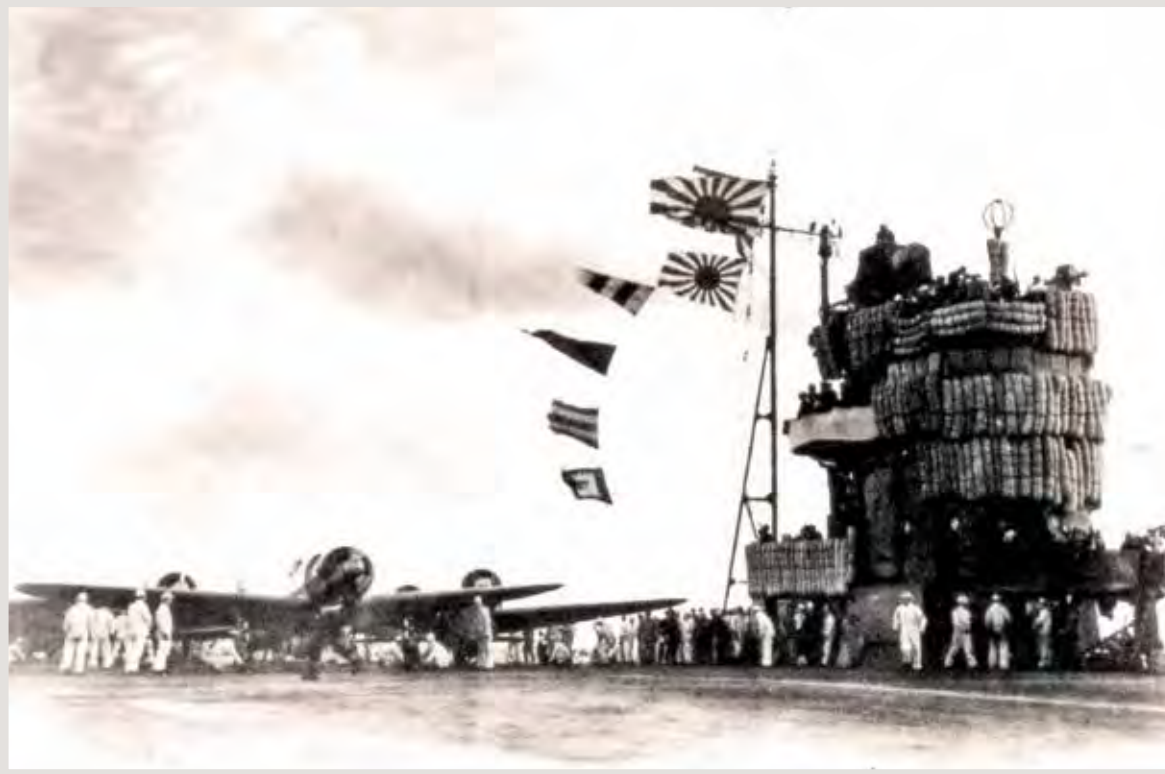
The best shipborne AA weapons were the quick firing weapon such as the Oerlikon, with its large 20mm round most effective if it caught an aircraft in its vitals or hit the pilot. The heavy machinegun – the .50 calibre – also had a spread of shot, a big enough calibre, and sufficient muzzle velocity to do good damage to an aircraft. It was rather like using a shotgun against the flying machines, but it was a big shotgun: smaller calibres such as those in .303 didn’t do enough damage.

## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

Such weapons were effective, but not to one hundred percent. Often an aircraft would get through the fusillade of shot fired at it, and successfully fire a torpedo or drop a bomb; divebombers – aircraft diving from a considerable height and releasing a bomb – indeed being a new weapon but one that was quickly taken up given its effectiveness both on land and – hopefully – at sea; proven in the Spanish Civil

War with the Stuka, and thought to be a new weapon for the sea war. And so it proved: in the carrier battles of the Pacific and against conventional ships such as the *Tirpitz*, the divebomber was to be an effective if short-lived weapon. The dive-bomber was to prove most vulnerable to anti-aircraft weapons, given the attack configuration of descending rapidly in a limited square of sky, and also conventional fighters. While at Midway the divebomber struck hard at the Japanese carriers and indeed proved decisive, as warfare technology evolved so did the dive-bomber's capabilities diminish, and post WWII it disappeared from armouries across the world.

Shipborne AA defences had an unintended, bitter, but understandable side-effect. Anyone in a ship having been attacked by an aircraft, especially if they had seen the consequences of a successful torpedo or bomb strike, was extremely nervous about being the victim of such an onslaught. Consequently AA crews tended to be quick on the trigger and slow on



*A scene on the deck of the carrier Akagi (Courtesy Bob Alford)*

the uptake as to what it actually was they were firing against. Some aircraft were slow biplanes, and easily enough identified. But most on both sides were fast metal monoplanes, looking similar enough to non-flying people as to be easily confused with the hostile's side's machines. The incidents of "friendly fire" began in the early years of WWII, and rapidly became worse.

The ultimate AA weapon was however the defending side's own aircraft, deployed far enough away from the strike force so as to ensure insufficient "leakage" of a massive aerial incoming force could not get through to attack the ships. This meant that some aircraft had to be deployed as defending fighters. Obviously they had to be given guidance apart from the aircrew's own eyes, and so radar was seen very quickly as being totally necessary to the defence. Radio linked everything together in a complicated but workable solution.

The aircraft were also an attacking force. Three main single engine types were carried by the Japanese fleet. Bombers – the Allied-designated

three-man Nakajima "Kate" – which could carry gravity-drop bombs, or torpedoes for anti-ship strike, and Aichi "Val" two-man divebombers, primarily designated for shipping attack. To protect the bombers the single-seat Mitsubishi "Zero" – the proper designation was "Zeke" – flew with the bomber force and warded off enemy fighters. The range of this strike force was in the region of hundreds of miles, depending on the load carried, superseding the big guns of the battleship, which could fire up to many miles, depending on the size of the gun.

### *Aircraft at sea*

Ever since someone in a navy thought that aircraft at sea were a good idea, the concept of keeping them there has been one eagerly embraced by some seaman, initially rejected by others, but eventually accepted by all.

Aircraft at sea have distinct advantages. Historically, they were first useful for reconnaissance – seeing where the other side's ships were so you could more effectively attack them, or spotting the fall of shot from your guns.

In this respect they were rather like those aircraft – balloons – employed in the American Civil War: a means to an end. The concept of towing a balloon from a ship was experimented with but did not eventuate as a custom and aviation at sea was not really a concept until necessity arrived.

When WWI arrived and Zeppelins came out to bomb Royal Navy warships it was realized that an on-board aircraft would be the best means of chasing them away. It was quickly seen that aircraft could be catapulted from a ship, or they could be lowered over the side to take off on water. But how could they be recovered? The concept had been tried: in 1912 Lieutenant Charles Samson had flown a biplane off a platform on board the battleship *HMS Africa*. Fighters were duly fitted to several warships. The problem of how to recover such a machine was one worth pondering over. Crash-landing – and losing – the aircraft was feasible, but losing the pilot too was too much to ask, especially when the through-life training and expense of a pilot was considered.

The concept of a deck from which to launch and/or recover the aircraft was one much experimented with in WWI, and eventually success was achieved in limited form. The light battlecruiser *Furious* was converted into an aircraft carrier and the first ever successful deck landing occurred in August 1917 when Squadron Commander EH Dunning landed his Sopwith Pup on board. Aircraft carriers in WWI however were in their infancy and their use was much decried; derided, applauded and otherwise argued about, as indeed aircraft themselves had been argued about during the war.

Indeed, Mark Connelly, the author of *Battleships and British Society*, notes "Naval historians have debated whether the Royal Navy (and indeed any other navy) should have built battleships at

all. The rise of air power, many have argued, sealed the fate of the battleship. Large and cumbersome, the battleship was a dinosaur by the twenties and thirties and fatally vulnerable to air attack according to this school of interpretation. The debate has been characterised as one that split navies between a younger, dynamic group who argued the case of the supremacy of aviation against the older men who remained wedded to their reactionary ideas of all-big-gun ships engaging each other in blue water. Geoffrey Till has argued that such interpretations of the Royal Navy are crude caricatures. He sees the Navy as one in which technological innovation was being discussed the whole time and informed doctrinal debate. According to Till, air power was taken seriously, but as an unproven force it could not be allowed to dominate thinking and planning entirely."

The carrier was much experimented with after the War. The 'big gun' battleship was still though the ambition of all seamen officers, and the carrier was seen as an aid to sea battle: useful for finding submarines perhaps, and for carrying aircraft to sea, where they did have their uses, but not otherwise a key element of sea power. This idea was hotly debated by some theorists however, who saw possibilities for the striking power of the ships.

Aircraft though in the main were not keeping up. The machines of the time were often slow, both in their top speed, thus limiting in a time/range equation, and in their approach speeds, thus meaning they were vulnerable in any idea of attacking a ship with bombs or guns. They were frail too – a hail of machine-gun fire was quite possible fatal to any aircraft hit. Aircraft had many annoying features which were detrimental to ships carrying them: they usually needed wind over the deck to become

airborne; they needed flammable fuel; they needed mechanical specialists to tend them, and they were quite delicate in construction – hardly suitable to be carried in quantity aboard a rolling, pitching, and often leaking ship. They needed a new specialized crew to fly them, and what were these new technically-minded people: officers or sailors?

As WWII dawned and came into being the future of the aircraft carrier was far from certain. The role of those operating air operations over the sea was also the subject of much debate and often acrimonious argument – should it be land-based aircraft or carrier-borne machines that filled this position?

In Britain in 1939 the battleship was still the king of the sea battle, and this concept was carried through to every other navy as well. But events in the war quickly began to change matters

The loss of the British carrier *Glorious* is a good illustration of how concepts were embedded. The situation is best described in John Winton's *Carrier Glorious*, but essentially this British ship was part of an invasion of Norway in 1940. The attack was a failure, and repulsed by a strong German defence the British withdrew. *Glorious* was steaming back to Britain, escorted by two destroyers, when she was surprised, and quickly sunk by two German battleships, the *Scharnhorst* and the *Gneisenau*, despite the best efforts of the two escorts, who were also sunk. *Glorious*, despite having aircraft available, did not have one flying in reconnaissance, which would have saved her, let alone in a mode where they could have defended her. Her commanding officer – Captain Guy D'Oyly-Hughes – did not rate aircraft carriers highly, and indeed was contemptuous of their aircraft's defensive abilities, and furthermore, annoyed by such things as course

## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

deviations he would have had to make to turn into the wind to launch and recover the aircraft.

Over the next five years the mindset of such officers was shattered. Significant combat events utilizing aircraft carriers included:

- The attack on Pearl Harbor by the Japanese forces in December 1941. This massive assault smashed many useful; heavy warships, and would have destroyed aircraft carriers too, if they had been there.
- The attack on distant land targets by airborne carrier-based assets, such as that upon Darwin on 19 February 1942. The use of aircraft bypassed shore heavy gun defences designed for use against battleships, which would otherwise have closed the coast and shelled their target. The installation of heavy guns on shore meant such ships were vulnerable to these attacks. The aircraft, as an alternative, were able to fly around such guns, and were only partially vulnerable to small rapid-firing gun systems.
- The attack on Japan by the aircraft of Lieutenant Colonel James H. Doolittle in April 1942, launched from the aircraft carrier *USS Hornet*. This daring raid, using B-25 "Mitchell" medium bombers, especially lightened for the take-off, made an especially useful psychological raid on Tokyo.
- In August 1942 the carriers *Eagle*, *Indomitable*, *Victorious* and *Furious* provided air cover along with the re-supply of aircraft to Malta as part of operation Pedestal.
- The finding and disabling

of *Bismarck* in May 1941 by aircraft launched from the carrier *Ark Royal*; she was then sunk by ships of the RN.

- The attacks on tactical land air bases in the Pacific, where islands were bombed and strafed by aircraft before troop landings.
- The battles of the Coral Sea and Midway which significantly utilised carriers.

As the war came to a close the usefulness of carriers in the public eye came more to the fore. The role of the battleship had not been devalued so much as reconsidered. Especially in the Pacific, the strategic concern was to take and invest land bases, hence the attacks on places such as Saipan and Okinawa. As these were islands, they needed to be bombarded by naval-based gunnery, which included attacks by aircraft, before the ground troops went in. Indeed, the more bombardment the better, because this saved Allied lives. Although the heavy guns of battleships were most useful, aircraft could often hit what ship-based guns could not, utilising rockets and bombs to great effect, and often flying in support of infantry, where heavy guns would have endangered friendly troops.

Different carrier types had evolved: the 'escort' carrier, which the Americans often called a 'jeep' carriers, as opposed to the main battle type. The difference was usually in tonnage – around 8,000 tons as opposed to 20-30,000 tons. The concept of a strategic carrier – one that was specifically designed for land attack, and designed to influence foreign affairs, was in the future.

### Protection force

Grouped with every carrier whenever she was in a combat zone was a surface protection force sometimes including

an attached sub-sea component of submarines. The purpose of this flotilla of vessels was to protect the carriers – a prime target – and also to let offensive operations be carried out unhampered by hostile combatants. The Darwin raid group was no exception. Three cruisers – heavy units *Tone* and *Chikuma*, and light cruiser *Abukuma*; were present, their big guns' primary task was to keep offensive surface vessels at a considerable distance from the carriers. Mitsuo Fuchida, the Air Group commander, and historian Masatake Okumiya, also suggest that two battleships, *Hiei* and *Kirishima*, were also present, although this is not borne out in other sources. It is an odd notation, because Fuchida was writing only 13 years after the raid, and one would presume the presence of two huge vessels as this would have been indelibly noticeable.<sup>8</sup>

### Cruisers: Heavy Cruisers x 2; Light Cruiser x 1

The design of *Tone* and *Chikuma* was

#### HEAVY CRUISERS

##### TONE AND CHIKUMA

**Builder:** Mitsubishi of Nagasaki

**Tone:** completed 1938; **Chikuma:** completed 1939

**Displacement standard:** 15,200 tons

**Length:** 648 feet / 190.3 metres

**Breadth:** 61 feet / 19.4 metres

**Draught:** 21 feet / 6.47 metres

**Maximum speed:** 35 knots

**Endurance:** 8000 nm

**Armour, belt:** 100mm (4 inches)  
(machinery) – 145mm (magazines)

**Turrets:** 25

**Armament:** 8 x eight-inch guns;  
8 x five-inch guns; 57 AA guns;  
12 x 24-inch torpedoes;  
5 or 6 seaplanes launching from two catapults, usually including: Aichi Type 0; and Nakajima Type 95.

**Complement:** 850

quite different to Western cruisers. Their firepower was concentrated forward of the bridge, and the aft end of the ship was kept for flying operations. The six seaplanes they each carried were very useful for reconnaissance, especially when she was working with an aircraft carrier group.

The two ships were virtually

### LIGHT CRUISER

**ABUKUMA** - river name in Tohoku ('Where the Bears Gather')

**Year completed:** 1925

**Displacement:** 5,570 tons

**Length:** 535 feet / 163m

**Breadth:** 49 feet / 14.8m

**Draught:** 16 feet / 4.9m

**Maximum speed:** 36 knots

**Endurance:** 9,000 nautical miles

**Armament:** 7 x 5.5-inch guns; up to 36 x 25mm AA; 6 x 13mm AA; 8 x 24" torpedoes; 1 seaplane launching from one catapult.

**Complement:** 438

### DISTANT COVER CRUISERS X 2

#### TAKAO-CLASS CRUISERS TAKAO AND MAYA

**Year Completed**

**Takao:** 1932

**Maya:** 1932

**Displacement:** 15,781 tons

**Dimensions:** 661'9" x 68'0" x 20'9"

**Speed:** 34 knots

**Armament:** 10 x 8-inch guns

8 x 5-inch guns

Up to 66 x 25mm anti-aircraft guns, 16 x 24" torpedo tubes

**Crew:** 773

**Destroyers:**

*Urakaze*

*Isokaze*

*Tanikaze*

*Hamakaze*

*Kasumi*

*Shiranuhi*

*Ariake*

identical.

The heavy cruisers *Takao* and *Maya* – both *Takao*-class – were deployed from Palau from 16 February as distant cover, meaning they were most likely positioned between where it was thought any elements of the ABDA force ships would be.<sup>9</sup> Although details have not been located, this would most likely have been between the main archipelagic islands near the Sunda Strait, as being the most likely choke point through which enemy vessels would have to pass.

A "screen" of seven, some suggest<sup>10</sup> eight, destroyers was also engaged to shield the group from submarines, although their torpedoes and guns were also useful against surface vessels, although this may well have been at a cost of themselves, their light build meaning no armour was carried.<sup>11</sup>

A submarine force was also grouped with the attack force, ironically the three remaining boats of the Sixth Submarine Squadron which had attacked Darwin the preceding month. In an operation which remains a revelation to most even today, four submarines had laid mines and attacked a convoy in mid-month, culminating in an action<sup>12</sup> where one of the vessels – the *I-124* – had been defeated in a close-range battle with the corvette *HMAS Deloraine*. The 279-foot (85 metre) boat, with her 80 crew on board, still lies outside Darwin harbour today. The other three submarines had fled, causing the Japanese High Command to think again about a methodology for closing down the northern port. Vengeance for their fallen comrades must have been on the minds of the three other submarine crews on board the *I-121*, *I-122*, and *I-123*.

The submarines' task was also force protection, but in a different manner from the close-range protection the surface ships provided. Roving far

ahead, behind, and "up threat" – in the direction from where any danger might emerge – the underwater warriors silently sought out enemy ships that might be trying to close the carrier group and attack. They took good care not to be near the force itself, else the escorting destroyers perceive them falsely as a threat, and attack them. This is a technique still practiced today with modern carrier groups.

Finally, the submarines were often used between the carrier force and the target to recover downed aviators. Surfaced, they could see a reasonable distance along the axis of flight to and from the target, and would be positioned accordingly. They could also be used as long distance scouts to report on weather, although in this function they were gradually being displaced by aircraft.

### Flying operations

Launching and recovering aircraft involved the whole carrier force. The aircraft carriers themselves had to turn into whatever wind was available, to give wind over the wings of the aircraft and therefore help lift them off the decks. Turning large ships such as these called for a lot of searoom, and turning with them was the whole protective force.

Once the aircraft "armada" had been launched – on 19 February 1942, 188 aircraft in total indeed necessitates such a word – the carriers could resume a different course, usually one that took them towards where their aircraft would be returning from, in case any were damaged and low on fuel. This had to be tempered with caution however, as it was usually the direction from where attack might eventuate. Given a strike could take some hours, the carriers and their escorts often would steam in a "racetrack" pattern, a large figure eight, for example. When the aircraft

## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

returned the carriers would again have to turn into the wind, this time to lower the landing speed at which the aircraft touched down, to be caught on arresting wires and dramatically stopped. In Darwin the direction of the incoming flight was more known and the steaming pattern altered accordingly.

The intricate complexity of the carrier operations was immense. It resembled a ballet of men, flying machines, weather, and ship operations. Aircraft were brought up from below the deck on lifts somewhat larger than Western carriers, as IJN aircraft did not have as capable folding wings – the Kates had folded wings, the Vals only folded wingtips – and readied for flight. The pilot and – in the divebombers and vertical bombers – aircrew, boarded and the engine was started. The aircraft was pushed and pulled into position for takeoff, guided by signalers armed with a complex set of hand movements to signal the aircrew as to how the aircraft would assist with engine and brakes. Once in position the engine was accelerated while the aircraft was held in position by its brakes and restraining cables.

Whether the four carriers which attacked Darwin had catapults is unlikely. One source suggests “Japanese carriers also began to be equipped with catapults just before war broke out, starting with the *Shokakus*.” However, another source suggests: “All takeoffs were deck launches, as Japanese carriers had no catapults.”<sup>13</sup>

An aircraft handler would give the final permission for release, and with the engine at full power the aircraft would accelerate at maximum along the deck and into the air over the bow of the ship. Failure of machine or men at this point was usually fatal: a “cold shot” meant the carrier would often run straight over the top of its aircraft, and if the impact of the crash hadn't



killed the crew the ship would often complete the destruction.

Once in the air the pilot was master of his craft to a degree, but he was usually to be part of a formation that would be part of a massed attack. Upon return the aircraft would approach the carrier from astern of the ship, which was steaming at high speed to give a headwind that would assist the landing. Most navies employed a “batsman” at this point who would assist the aircraft pilot by signals, indicating he was too high, low, fast, slow, or off course. An aircraft could be “waved off” at this point, meaning a fly over of the ship; rejoining the line of aircraft waiting to “land on” and having another attempt. Crashes on deck were not infrequent, and for this eventuality – or any other emergency – firesuits men in helmets were kept at instant readiness, ready to take to a crashed and possibly burning aircraft with fire axes and retrieval of the crew. Fighter pilot Tsunoda Kazuo recalled: “To me the

most difficult aspect of operations from a carrier was landing on the deck. The tail hook landing was always challenging. There were sometimes accidents and I saw aircraft crash and the pilots were usually killed.”<sup>14</sup>

### *The Japanese Commanders*

At the start of 1942 the Japanese carriers of the First Mobile Striking Force were the most powerful naval force on earth. Referred to more simply as Mobile Fleet, it was commanded by Vice Admiral Nagumo Chuichi, who flew his flag from the carrier *Akagi*. Some sources refer to

*Detail of the port side of either Akagi or Hiryu. Note the gun sponsons. (Darwin Military Museum via Simon Loveday)*

*Japanese pilots Masao Asai and Masao Sato aboard carrier Akagi, 1938-1939, with Zero fighter*



Mobile Fleet as “Nagumo’s Carrier Task Force”<sup>15</sup> or “Nagumo Force”.<sup>16</sup> However, Nagumo himself had little to do with his own air operations. While a competent officer, he was “largely passive and not terribly innovative”.<sup>17</sup> Little if nothing of the success of the force can be attributed to Nagumo. It was rather a case of being in the right place at the right time: he was commanding a superior weapon system which was employed using effective and successful doctrine. While the Pearl Harbor attack was a celebrated success, Nagumo failed to order a further strike. This may have crippled the base infrastructure, and according to Admiral Nimitz could have lengthened the Pacific War for another two years.<sup>18</sup>

Fortunately for Nagumo, he had a number of talented officers serving under him who were deeply committed to the development of high quality, massed naval airpower. The stand-out was Nagumo’s air officer, Commander Genda Minoru, who has attracted superlatives such as “brilliant”<sup>19</sup> and “house genius”.<sup>20</sup> It was Genda who first pushed for the carriers to be grouped together in a single command. It was also Genda who had designed the daring Pearl Harbor operation, so he was largely responsible for developing the air doctrine that enabled aircraft from different carriers to operate together effectively as a single force. As this was so new, there was nobody else suitably credentialed to critique his plans. Nagumo himself was certainly unable to do so. Hence the air operations of Mobile Fleet “were disproportionately the responsibility of a single individual”.<sup>21</sup>

The core architect of the Darwin air strike was undoubtedly Genda. However he had a cadre of very experienced and capable aviation leaders. Chief among these was Commander Fuchida Mitsuo, who



*Japanese carrier power at sea. With the island on the port side, this is either Akagi or Hiryu. Two other carriers in the background leader three battleships or battlecruisers, with two or three carriers behind (Simon Loveday, Darwin Military Museum)*

had famously led the Pearl Harbor attack. Fuchida himself led the B5N Kate unit on *Akagi*. Also from *Akagi* was a veteran fighter pilot who led the Zeroes, Lieutenant Commander Itaya Shigeru.<sup>22</sup> Another influential officer was Lieutenant Commander Egusa Takashige, who led the D3 Val unit onboard *Soryu*. He was the recognised Japanese expert on dive bombing.<sup>23</sup> Further, Genda respected him as being a “God-like” combat leader.<sup>24</sup> Egusa had led the crucial second wave dive bombing attack against ships at Pearl Harbor. Indeed, virtually all of the flying leaders at Darwin were Pearl Harbor veterans. At least 80% of the aircrews themselves must have been similar veterans.<sup>25</sup>

The Darwin raid would be the first time the carriers of Division 1 (*Akagi* and *Kaga*) and Division 2 (*Hiryu* and *Soryu*) were to operate together since Pearl Harbor. Indeed the Division 1 carriers had initially returned to Japan. They then only faced insignificant opposition during raids against Rabaul and the wider New Guinea area in January. It was in reference to these raids that Fuchida made the comment “if a sledgehammer had been used

to crack an egg, this was the time”.<sup>26</sup> Certainly this was a curious use of the force at this critical time, especially given that the two carriers of Division 5 (*Shokaku* and *Zuikaku*) had also participated. Thus in the two months following Pearl Harbor, *Akagi* and *Kaga* steamed long distances but faced only negligible opposition.

It was in early February when they arrived at Palau and made rendezvous with *Hiryu* and *Soryu*. These carriers had detached after Pearl Harbor to support the Wake Island occupation. So the best carriers of Mobile Force were again re-united and the first mission was to strike Darwin. Douglas Lockwood, writing the first book on

*Pearl Harbor attack, 7 December 1941. A Japanese Navy Zero fighter (tail number A1-108) takes off from Akagi, on its way to attack Pearl Harbor during the morning of 7 December 1941. (Official US Navy Photograph, National Archives Collection)*



## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

the Darwin raid, and interviewing the aviator, claimed that Fuchida saw Darwin as similar to Rabaul, and thus the sledgehammer and egg metaphor was again valid.<sup>27</sup>

However it is clear that the Japanese recognised the strategic value of Darwin in regard to their operations in the Netherlands East Indies. The Japanese Navy General Staff had approved the Darwin attack as soon as possible after Pearl Harbor. Genda himself 'recommended that it be the first target'.<sup>28</sup> The commander of Carrier Division 2, Rear-Admiral Yamaguchi, wanted to attack Darwin himself using only *Hiryu* and *Soryu*. He first made this proposal on 20 January, when the Division 1 carriers were far away in the New Guinea area. However, it is also recorded that Yamaguchi's reasoning made reference to a surprise attack by American destroyers on a Japanese convoy off Balikpapan. He wanted all bases within a radius of 600 miles of intended operations to be attacked.<sup>29</sup> Darwin was certainly within such a radius in regard to Timor, for example.

The Japanese could have attacked Darwin much earlier. However Yamamoto himself made it clear that four carriers would be used, even though it meant delaying the attack. Accordingly, on the afternoon of 9 February Yamamoto sent Southern Force Telegraph Order No. 92 to the carriers. This assigned Mobile Fleet to attack Darwin one day before the invasion of Timor was planned to commence, around 19 February. The order also comprised a second part which sent Mobile Force into the Indian Ocean to destroy enemy forces south of Java.

These plans make it clear that Darwin was considered an important target. Genda said simply "the planning was a comparatively easy task".<sup>30</sup> He had good intelligence

regarding Darwin itself, and did not expect serious opposition. Perhaps this overconfidence led to what was perhaps the only oversight during the operation. During attacks elsewhere, the Japanese were meticulous in attacking all air bases in the vicinity of the target. However at Darwin they failed to attack Batchelor, just 50 miles south of Darwin – less than 20 minutes flying time<sup>31</sup> for the bombers. Batchelor was very significant in that it was used by American heavy bombers. RAAF Wirraways had been dispersed there from Darwin. Batchelor was also the only location outside of Darwin to be allocated AA guns. So this oversight is unexplained, especially as the field would usually be easily seen from the air given the relatively thick surrounding jungle. But it seems the Japanese never knew about Batchelor.<sup>32</sup>

### *The Japanese strike weapon*

The Japanese carriers had one unique advantage over any other carrier force in the world: they combined their aircraft into one formidable weapon, to be used decisively against any target.<sup>33</sup> Other carrier-operating nations had not yet understood and undertaken this tactical idea. Given all of the aircraft from any Japanese carrier force – at Darwin 188 aircraft operating against a target of town and shipping – this meant the air fleet armada was virtually unstoppable. No matter how good the defender's countermeasures were, and at Darwin they proved not to be very good, the countermeasures would be overwhelmed, and the target swamped and devastated.

The first years of WWII had at first seemed only to confirm the supremacy of the "big gun" ships. The British leader Churchill fretted about the likes of the raider *Bismarck* and whether the Germans would employ the newly surrendered French battleships. Naval operations and sea power were still



*Japanese raid carrier article/Kate replica aircraft in 2005, with ordnance slung. (Photo by Captain Joe Broker)*

defined around the capital ships. But in November 1940 the Royal Navy launched the first entirely carrier aviation anti-ship strike of the war, when Italian battleships were sunk or disabled in the port of Taranto. This effectively put the potentially powerful Italian capital ships out of the war, and helped secure the balance of power for the British in the Mediterranean. The strike weapon that produced this stunning result was just 24 fabric-covered biplanes flying from a single carrier – perhaps a force more likely to have been thought useful for scouting than as a strike force.

Such a stunning result did not go unnoticed by the Japanese, who studied Taranto closely. It ultimately led to the formation of the First Air Fleet in April 1941: for the first time carriers were being combined together as was natural with the "big gun" ships. This has been called a "truly revolutionary development" that transformed naval aviation from an ancillary role to "a decisive arm of battle".<sup>34</sup> Within months this led to the well planned and

*Val escorted by a Zero. Note the dive bomber's undercarriage does not retract. (Photo by Victor G. Archer)*



perfectly executed Pearl Harbor strike.

The Japanese were the first to combine the air fleets of multiple carriers into a single strike force. Even until Midway and beyond, the big American carriers operated independently – indeed, depending on the carrier itself, some squadrons from a single carrier were unable to execute properly coordinated attacks. The Japanese, however, were able to get multiple squadrons from multiple carriers into the air at one time, and co-ordinate them successfully to overwhelm a designated target. At Pearl Harbour, two strikes were launched from an unprecedented six big fleet carrier decks. Both strikes comprised a mix of fighters, dive-bombers and torpedo bombers (also used as conventional “level” bombers). Including the fighters that flew combat air patrols over the carriers, an incredible force of over 400 modern aircraft were utilised during the operation.

Pearl Harbor is remembered as the “day of infamy” which began the Pacific War and brought the United States into WWII. However, it was revolutionary in fully utilising this newly discovered combined power of carriers for the first time. Matching Japanese military doctrine perfectly, the carriers delivered overwhelming power to a particular point in a surprise attack, hoping to deliver a knock-out punch. They did deliver a hefty blow to the American battleships, but the great irony was that they missed the only force that would ultimately reckon with them on anything like equal terms: the US fleet carriers.

But after Pearl Harbor, the six great *Kido Butai* carriers were fated to never again operate together. Five of them combined together in the Indian Ocean in April 1942. However, due to damage and aircraft losses to the two Division 5 carriers at the Battle of the



Coral Sea in May, at the crucial Battle of Midway the following month only four of the major fleet carriers could be assembled. These were the same four carriers of Division 1 & 2 that attacked Darwin in February. In this respect, the attack on Darwin counts as one of the few great carrier raids mounted by the formidable Combined Fleet before it was decimated at Midway.

However, the Darwin raid was unusual in comparison to the other big raids. Recently, and drawing on contemporary Japanese sources, authors Jonathon Parshall and Anthony Tully, have pointed out that a critical practice in Japanese carrier operations was “deckload spotting”, whereby half of the potential aircraft force could be launched at one time.<sup>35</sup> The lighter aircraft, namely the Zero fighters, would be spotted forward as they needed much less of deck-length to take off. The heavier aircraft, the two-seat divebombers (D3A1 “Vals”) and three-seat attack bombers (B5N2 “Kates”), would be further back.<sup>4</sup> But

<sup>4</sup> Allied code names for Japanese aircraft were formalised later in 1942, so their use in context of the Darwin raid is not historically correct, but are used here because they are so widely recognised. However, the term “Zero” refers to the Type 0 Naval Fighter,

only about half of the aircraft on a single carrier could be assembled on the deck at any one time. At both Pearl Harbor and Midway, such “deckload” strikes were launched.<sup>36</sup> This meant that the first strike at Pearl Harbor comprised 180 aircraft, or about half the full attack strength.<sup>37</sup> A second wave was launched afterwards with the remainder of the aircraft.

Darwin was unusual as a maximum strike was launched in a single wave. Thus the first half of the strike was launched, and kept waiting while the remaining aircraft were brought up from the hangar deck. This was quite a complex business, as each elevator brought up one aircraft at a time, which would then be man-handled into a precise position on deck. Parshall and Tully refer to this practice of launching the entire air group as being “probably impractical” as the first wave would burn up precious fuel waiting for the second wave to join them. They suggest it would take at least half an hour to complete. In fact, this appears to be exactly what happened during

rather than being the code name, which was “Zeke”. The “Vals” were Type 99 carrier bombers; the “Kates” were Type 97 carrier attack aircraft.

*Kittyhawk & Zero  
fight over Darwin  
on 19 Feb 1942.  
Painting by Bob  
McRae*

## JAPAN'S FORMIDABLE NEW STRIKE WEAPON OF WWII – ITS AIRCRAFT CARRIERS, AND THE DARWIN RAID

the Darwin strike. Japanese records refer to a three-Zero Combat Air Patrol being launched at 0615h.<sup>38</sup> Commander Fuchida, the same famed leader of the attack force who led the Pearl Harbor strike, took off in his B5N attack bomber from *Akagi* at 0622 ... most likely he followed the nine Zeroes from his carrier, and possibly some of the lighter divebombers as well. But after take off, his aircraft did not depart from the vicinity of the carriers until 0700, almost three-quarters of an hour later. This is consistent with waiting for the second deckload of aircraft to be brought up, spotted on deck and launched from each of the four carriers.

Given the changed circumstances, it is most likely that both deckloads were spotted differently on 19 February, and probably did not comprise evenly balanced proportions of aircraft. Other factors, such as cruising speed and overall range would have been taken into account. One source<sup>39</sup> suggests the divebombers took off last, and used their faster cruising speed (as compared to the Kates) to catch the main force en route. However the take-off times quoted vary hugely with that given in the Japanese Official History. Also, technicalities, such as the fact that the Vals could only use the middle elevator due to only having folding wing-tips, rather than full folding wings (such as the Kates), meant that a selection of aircraft in each deck-launch was more likely. This is consistent with the Zeroes being stowed forward in the hangars, the Vals midships, and the Kates, which needed the greatest deck-length for take off, were aft.

So why was Darwin different in having just a single, maximum aircraft strike? Clearly, the recent experience of Pearl Harbor loomed large in the minds of the Japanese planners. Among other things, most of the aircraft losses at Pearl Harbor were in the second

wave, after the defenders had been fully roused, angry, and fighting back as hard as they could. Surprise would pay dividends and minimise losses.<sup>40</sup> Besides, a second strike was planned to take place anyway, only with land-based bombers at high altitude. These would go in unescorted as the carrier strike would destroy any local fighter opposition, which the Japanese knew would not be significant. Evidence of the Japanese disregard for Allied air strength was a Combat Air Patrol of just three Zeros being maintained over the carriers during the day (from a total pool of 15 aircraft held for this purpose). This is consistent with expecting, probably at most, a prowling flying boat or reconnaissance aircraft. This did, in fact, occur as will be related later.

Darwin was always seen as a raid against a relatively weakly defended target. As Fuchida would later famously comment: "It hardly seemed worthy of us. If ever a sledgehammer was used to crack an egg it was then."<sup>41</sup> So there was never a need to consider a second carrier strike. Also, a single strike allowed the Mobile Fleet to do their business and return north as quickly as possible, thus limiting their exposure near Allied territory. Lingering in the area increased the possibility, however unlikely, of enemy attack by some means. Finally, because of the perceived weakness of the target, the carriers could get reasonably close to the target, thus permitting the luxury of extra time in the air burning fuel. The Japanese plan was to launch the strike at a point 80 miles south of Babar Island, well into the Arafura Sea. This gave an approximate range to target of around 200 miles. This is similar to other raids flown at this time – Pearl Harbor was also launched from a similar range of 200 miles.<sup>42</sup>



*Dr Tom Lewis and Peter Ingman are the authors of Zero Hour in Broome, 2010, Avonmore Books, which described the March 1942 attack by nine Japanese Zero fighters on Broome – the second-most devastating air raid on Australia, in terms of loss of life.*

THIS IS A DRAFT EXTRACT FROM THEIR NEW BOOK – CARRIER ATTACK! DARWIN 1942 – WHICH IS JUST BEING RELEASED. THE WORK IS A TECHNICAL ANALYSIS OF THE 19 FEBRUARY RAIDS ON DARWIN, WHICH KILLED AROUND 250 PEOPLE, AND SUNK 11 SHIPS.

## (Endnotes)

1 Hobbs, David. *A Century of Carrier Aviation: the Evolution of Ships and Shipborne Aircraft: USA*: US Naval Institute Press, 2009. (p. 146)

2 Parshall, Jonathan, and Anthony Tully. *Shattered Sword*. USA: Potomac Books, 2005. The authors suggest *Soryu* could "outrun *Kaga* at only 40% power" (p. 9)

3 The angled flight deck, allowing landings while takeoffs were being carried out at the bow of the ship, was to be a 1950s concept, as was the mirror landing system, and the ski jump – all ideas of the Royal Navy. Nuclear engines from the USA were a massive improvement, giving speed, enormous endurance, and limitless range. The use of helicopters and the development of the "commando carrier", made for amphibious landings, were significant.

4 See the *WWII database* [http://ww2db.com/ship\\_spec.php?ship\\_id=A465](http://ww2db.com/ship_spec.php?ship_id=A465) The authoritative Hobbs' *A Century of Carrier Aviation*. (p. 148) notes this rationale, but says there is no evidence to support it.

Also see for a further in depth discussion with more factors Polmar, Norman, and Minoru Genda *Aircraft Carriers: A History of Carrier Aviation and Its Influence on World Events*. Volume 2. (p. 72). Google ebook. [http://books.google.com.au/books?id=6z7quhWS-BoC&dq=port+island+s+aircraft+carriers&source=gbs\\_navlinks\\_s](http://books.google.com.au/books?id=6z7quhWS-BoC&dq=port+island+s+aircraft+carriers&source=gbs_navlinks_s)

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9 Combined Fleet website. <http://www.combinedfleet.com> Accessed May 2012.

10 A brief discussion on the <http://www.j-aircraft.org> discussion forum led to a suggestion that the destroyer *Yugure* was also present. 28 November 2012.

11 Combined Fleet website. <http://www.combinedfleet.com> Combined Fleet movements 15 February 1942: DesRon 1's ABUKUMA departs Palau with the Carrier Striking Force's CarDiv 1's AKAGI, Car Div 2's HIRYU and SORYU, CruDiv 8's CHIKUMA and TONE and DesDiv 17's URAKAZE, ISOKAZE, TANIKAZE and HAMAKAZE and DesDiv 18's KASUMI, SHIRANUHI and ARIAKE. Accessed May 2012.

12 See *Darwin's Submarine I-124*, published by Avonmore Books, and written by Tom Lewis. (2010)

13 See "Japanese Carrier Operations: How Did They Do It?" Article first appearing in the Spring 1995 issue of *The Hook* magazine, published by The Tailhook Association. Author: Carl Snow, Tailhook Association archivist. <http://www.ussessxcv9.org/pdfs/Japanese%20Carrier%20Operations.pdf>

(Accessed June 2012.) Mark Stille agrees in *Imperial Japanese Navy Aircraft Carriers 1921-1945*.

14 Tsunoda Kazuo served as a fighter pilot in the Imperial Japanese Navy from 1937 to 1945. He gained the rank of Lieutenant and was credited with 13 aerial victories, many of them Australians he fought in New Guinea. 89 years old when interviewed, he was living in a cottage in the countryside in Chiba Prefecture where he was interviewed by Peter Williams and translator Yayoi Akaboshi.

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16 Fuchida, Mitsuo. *Midway The Battle that Doomed Japan*. Hutchinson of London, London, 1957, uses "Nagumo Force" throughout, e.g. p.55

17 Tully and Parshall. (p.14)

18 [http://en.wikipedia.org/wiki/Attack\\_on\\_Pearl\\_Harbor](http://en.wikipedia.org/wiki/Attack_on_Pearl_Harbor) accessed 25 November 2012

19 Fuchida (p.43)

20 Tully and Parshall. (p.17)

21 Tully and Parshall. (p.17)

22 Lockwood, p.8 refers to Itaya as an "already established ace". However he does not appear in the list of Japanese naval fighter aces in Hata, Izawa and Shores. *Japanese Naval Air Force Fighter Units and their Aces 1932-145*. Grub Street, London. 2011.

23 Tagaya. (p.21)

24 Parshall and Tully. (p.132)

25 Parshall and Tully p.88: at Midway in June 70% of Val dive bomber crews and 85% of Kate bomber crews were Pearl Harbor veterans. Some months earlier at Darwin these ratios must have been even higher.

26 Fuchida (p.56)

27 Lockwood, Douglas. *Australia's Pearl Harbour*. Melbourne: Cassell. 1966. (p.5)

28 Lockwood. (p.6)

29 *Senshi Soshō*. (p.1-2) *Bôeichô Bôei Kenshûjo Senshishitsu* [Military History Department, National Institute of Defense Studies, the Defense Agency] ed. *Ran'in Bengaru-wan hômen kaigun shinkô sakusen* [*The Dutch East Indies and Bengal Bay Area: Naval Advance Operations*]. *Senshi Sôsho* vol. 26. Tokyo: Asagumo Shinbunsha, 1969.

30 Lockwood. (p.7)

31 The Kate bombers had a 235 mph maximum, and a 161 mph cruise speed. Francillon, *Japanese Aircraft of the Pacific War*, which were translations from the Japanese manufacturers, gives B5N2 Kates - 140kts at 3,000m, and D3A1 Vals - 160kts at 3,000m. (Courtesy Bob Alford.

32 Email from Bob Alford 27 November 2012. A Betty bomber crashed near

Darwin on 4 April 1942 and a large number of documents were recovered from it. Airfields were marked at locations such as Daly Waters and Katherine, but there was nothing marked at Batchelor.

33 *Shattered Sword* analyses this comprehensively, and for the authors, makes this deduction for the first time.

34 *Shattered Sword* (p.86)

35 *Shattered Sword* (p.86)

36 At Midway the second strike was never launched: the Japanese carriers were famously caught while frantically re-arming these aircraft for attacking the US carriers that had just been detected; they had been prepared with weapons for a ground strike against Midway.

37 By the time of Midway, the Japanese carriers were short of aircraft. The first wave against Midway comprised just 108 aircraft.

38 These times and subsequent detail are taken from the DMM translation of *Senshi Soshō*.

39 Tagaya. (p. 49)

40 Most of the first wave P.H. losses were the torpedo bombers, that had to fly dangerously low. Ignoring these losses, the first wave losses at Pearl Harbor were just a handful of aircraft – indeed, virtually the same as "Darwin" (where no torpedoes were used).

41 Lockwood. (p.5)

42 Francillon. (p.8) In emergency circumstances longer range raids were launched, for example on 20 December 1941 Carrier Division 2 struck Wake island from around 350 miles, although the force comprised only divebombers and fighter escorts.



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# Britannia Royal Naval College Report

BY MIDSHIPMAN JOSHUA ARMSTRONG

“Midshipman Armstrong, Captain’s Cabin.” There are not many good things that start by being called up to see the Captain, but as I gave my uniform a once over and gingerly knocked on Commander Sonter’s door to present myself, the then Commanding Officer of *HMAS Anzac*, I was greeted with a smile and a signal informing me I had won the Commodore Harry Adam’s Prize. To my relief.

The winning of this prize, which involves a one week exchange with Britannia Royal Naval College, Dartmouth, a return flight to London and \$500 was for me one of the greatest honours to be able to represent our Navy at such a fine institution. In my brief time I learnt a great deal, had an amazing time and made excellent friends. If I had one criticism is that it was not long enough!

The primary course of Dartmouth is the Initial Naval Training Officer course which is of a similar length and purpose to NEOC. At the time of my visit the course was two terms both consisting of 14 weeks with leave inbetween. The first term focused on basic Military and Naval skills, beginning with a two week militarisation period much like ITP, and ending with the ‘Assessed Basic Leadership Exercise’ on (and in) the hills, rivers and bogs of Dartmoor. Term 2 was primarily spent onboard a capital ship for 10 weeks, followed by exams and the ‘Maritime Leadership Exercise’ assessing Mariner and Navigation skills on the river Dart. This has now been altered to a three term of consisting of ten weeks each; of again the first being Militarisation, Marination with more focus on instruction in strategic studies and maritime leadership, then Initial Fleet Time of 8 weeks, an examination week



and a passing out parade week.

In most respects college life is very similar, easier in some respects with less time allocated daily to Drill, and harder in others, especially regarding the leadership assessments judging by the amount that fail. Of interest is the hierarchy that exists at the college due to there being three courses being present at different stages. Up until the passing out parade course members are considered Officer Cadets, and are only given any form of rank following their militarisation training to proceed on IFT, which consists of a white tab either worn on their sleeve or under their substantive rank on their epaulette. Following the parade they are entitled to wear their full rank and are given their commissions.

For my time at the college I was essentially a member of the Initial Warfare Officer Course, the third term for Warfare Branch officers at Dartmouth. And as IWOFF students have passed out, they are termed Seniors and act in a Leadership

capacity at the college whilst completing their studies, of which it is the equivalent to our Phase I & II of JWAC. This was perfect for me as of which the course had a very high proportion of those selected to be Submariners and we were all essentially at the same stage of training. IWOFF itself much like the early phases of JWAC focuses on Navigation, Mariner Skills, Rules of the Road and Meteorology. In addition, it includes strategic studies, time on a bridge simulator as well period on one of the Colleges Yachts with the opportunity to gain a RYA Day Skipper ticket.

From IWOFF Warfare Officers proceed to a nine month posting onboard a surface vessel of any variety of size and purpose, with a four week Navigation coursed in that period at *HMS Collingwood*, across the harbour from Portsmouth, followed by week long assessment ashore to be awarded their NWC. This is probably the greatest difference in our training that their first significant time on the

## Britannia Royal Naval College Report

bridge is to gain their Watch Keeping Certificate, of which the awarding of lies not in the hands of their Commanding Officer, but following assessment on a Bridge Simulator. After this they proceed to a 14 week course back at Collingwood for Divisional Officer and warfare training before commencing Submariner Training or being posted to a Surface vessel for Endorsement.

As I visited in December I was welcomed by sleet, bitter winds, and cold rain, but also had plenty of blue sky over the beautiful college and town that is Dartmouth and BRNC. The college itself sits on a hill over looking the very picturesque English town on the river Dart which the college backs on to. This naturally leads itself to plenty of time on the water on their variety of motor boats and yachts, as well as late night runs ashore to a number of the pubs in the area. Arguably just as good as the blue water and white sands of Jervis Bay.

I had been told that in the past those before me had experience something of a tailored program, I had however said that I was more than happy to do what ever it is that the rest of the IWOFF officers were doing. I was not disappointed. First up Monday morning was Parade practice, and although I was told I didn't have to march on the day, it was said to the squad they were looking a bit thin on numbers. I offered to march if it made things easier, if only to be polite. Luckily it was the last I heard of it, and I was given a nice VIP seat at the Parade amongst the various visiting high ranking officers and dignities. A novelty for a Midshipman, and to the benefit of a very grateful Sub-Lieutenant who was my host for the week who also gained a seat.

This was then followed by a very familiar Quality Control session regarding their course content, and a



not very familiar sit down discussion with the Commodore commanding the college. Commodore Williams noted how both our Navies have recently began to operate closer together in recent years considering our shared history, of which he was full of praise for our Navy and stated the respect for which it is held. This seemed to be a fairly familiar theme throughout my time.

However, as it was the last week for IWOFF there was not an awful lot scheduled for them to do. I was therefore able to watch a lot of fairly awful English TV, learn Uckers and generally get to know the other Officers and Cadets as I just blended into the scenery. As I walked the magnificent halls, passing various portraits and model ships navigating its labyrinth of passageways, I found everyone was exceptionally friendly, if not curious. As to the culture at the College, I found it very similar to Creswell, if only being a little bit more formal in some areas, but on other end of the scale more boisterous.

I certainly experienced a work hard and play hard attitude amongst the junior officers centered around a strong culture of banter. This was perhaps best epitomised during the comedy night that was staged, in which not many cadets or staff got off lightly. It was also the scene of my first and last Fosters,

much to their surprise. Perhaps as a punishment we had a fairly intense PT session early in the morning, followed by more Uckers and a journey up the river for lunch. During my visit I was able to organise a visit to Plymouth and see much of the Fleet including *HMS Ocean* and a very impressive Vanguard Class SSBN. Later in my own time I was able to visit Portsmouth and see *HMS Victory*.

My visit as well as the journey of those I spent time with during the week ended with the Passing out Parade overseen by the First Sea Lord Admiral Stanhope and the Winter Ball. For those graduating the highlight was marching up the stairs, the prerogative only of those who are commissioned much like our own tradition on the Quarterdeck at Creswell. This then culminated the next evening at the Ball which lasted into the early hours of the following morning.



On the whole what I found interesting was a strong warfare culture that pervaded nearly all aspects of training, which results in Young Officers of all branches having a great sense of context for their training and of purpose. It was evident even at Dartmouth that the RN has embarked upon program to combat 'Sea Blindness' and although aimed at the general public and the political class, educating their Young Officers about the purpose of the Navy is seen as the first stage of that. As stated, the IWOFF curriculum includes amongst other tertiary level subjects a period of Strategic Studies which is accredited by Plymouth University. Perhaps the ADF could greater utilise the considerable academic facilities of ADFA in this capacity for all of its officers. In their first year RAN Officer would be superior navigators and perhaps a more grounded officer due to their time in the fleet on the bridge, but an RN officer would have a better idea of the Navy, its job and the world off the bridge. This initial investment early in a Warfare Officers career seems beneficial as it provides a solid foundation for the future.

Perhaps considering that Australian officers in the past completed their training at Dartmouth, it is a suitable place to be reminded of our previous bonds. It seemed in an effort to mature and be independent we let slip opportunities and strategic knowledge that could have been shared. News that we will taking advantage of the RN's strength in Amphibious operations and ASW is certainly the step in the right direction, as is that we are providing opportunities for those laid off during the latest round of UK defence cuts. Although there are not many Wardrooms these days that don't have a RAN Officer with an English accent, surely however more integration is possible through making



more billets and courses in both Navies open beyond a handful of designated exchange postings. This would surely benefit career satisfaction and development, but more importantly help cooperation and provide a cost advantage considering the contraction of defence budgets across the Western world in contrast to the developing arms race in both our Oceans to our North.

From what I have observed there is certainly a capacity, a willingness and clear benefits for our navies to work together beyond our current ad hoc Task forces and handful of short exchanges. Talking to a number of Royal Navy officers there is a genuine desire to work more with the RAN, and other Commonwealth navies, reflecting a more global outlook rather than a solely North Atlantic and the European Continent focus. Considering at any one time the Royal Navy maintains permanently in the Indian Ocean four Minehunters, a Bay Class Dock Landing Ship, at least two Warships and an SSN, we have clear, and growing, mutual interests in a body of water far from any current US Naval base.

So whilst much is made these days about Joint Warfare across the services, and this is certainly a great force multiplier, in reality coalition war fighting across navies is more

important that it has ever been. And although our use of primarily US developed weapons systems has in the past led us away from the Royal Navy, our proven common procedures remain the same, and this is arguably more vital to cooperation. As the First Sea Lord, Admiral Stanhope said at the passing out parade: 'the Royal Navy remains as the gold standard in the world,' and having seen this first hand I have no doubts.

What makes the Royal Australian Navy so unique, as well as lucky, is that it able to utilise the resources of US defence industry and employs these advanced platforms using Royal Navy principles and procedures. Thus through the combination of the best of both worlds, Australia has one of the most respected Navies worldwide and certainly one of the most effective. It is through exchanges like this at Dartmouth, whether they be operational or cultural, that facilitate this continued strength. I will certainly take any opportunity in the future to work with the Royal Navy to return and apply that deep knowledge and experience in our region, and am very grateful that I now also have colleagues that I can call upon in the future. I therefore encourage every Junior Officer to write about issues that matter to them, and apply for this fantastic opportunity. 🌟

# THE BATTLE FOR THE SOUTH CHINA SEA – WORLD WAR II, TODAY AND INTO THE FUTURE

BY MIDSHIPMAN JOSHUA ARMSTRONG, WINNER OF THE 2011 HARRY ADAMS ESSAY CONTEST

*This article is dedicated to the 3,505 US Submariners who are still on eternal patrol. Having sacrificed their lives in World War II, by the highest ratio in the United States Military, so that today we may live in Peace and Freedom. May that never be necessary again.*

The appearance of military installations on seemingly insignificant atolls, with oil deposits beneath and oilers passing by as naval vessels perform exercises in the middle of one of the world's busiest shipping channels, the South China Sea is fast becoming the most strategically important area in the world. Add to this Taiwan and the US 7th Fleet, on its edge in the context of petroleum politics, all creates a volatile mix in a region where intimidating, risky, muscle-flexing manoeuvres are increasingly common.

For this reason the South China Sea has been dubbed by some as the "Second Persian Gulf", whilst this currently refers to the estimated large energy deposits, it too more and more is a vital Sea Line of Communication for shipping and military operations. But perhaps more ominously the tag is fitting as it enters a new age of similar turmoil and geopolitical wrangling, to possibly become the world's central focus of conflict in the coming century.

However it was only 70 years ago that the South China Sea was a key battleground in World War II. Following Imperial Japan's attack on Pearl Harbor, both powers engaged in a campaign to gain control of this sea, in which the US was to prove victorious. Crucial to the Allied victory in the Pacific was the US Submarine service devastating campaign against Imperial Japan's homeland as well as its Naval and Military forces, which despite

forming 1.6% of the United States Navy<sup>1</sup> sank 55% of tonnage.<sup>2</sup> Thus why Japan's then Prime Minister Hideki Tojo named the Submarine War on shipping as a major reason of why the allies defeated Japan.<sup>3</sup>

Whilst this proved successful in the 20th century, such a strategy could be just as useful in 21st century as the US's naval dominance in the region comes under challenge by The People's Republic of China. This is fundamental to Australia's security as 70% of Australia's trade moves through<sup>4</sup> the South China Sea, which China claims and has treated like its own territorial waters, believing it has "indisputable sovereignty"<sup>5</sup> over the area. The protection of our trade, fuel supply, sea lanes of communication and our northern approaches are named therefor in Force 2030.<sup>6</sup> Crucial too is our alliance with the US, forged during the Pacific Campaign, and the protection that provides, including guaranteeing free passage on the high seas.

The aim of this paper then is to

focus on what lessons can be learnt and applied by the RAN and its allies from the US Campaign in the Pacific, as those nearly identical sea lanes and materials pass through the very same region the US fought Imperial Japan those years ago, and may be an area of conflict in years to come. I therefore discuss the development and motivations for China's current strategy, and argue that the US's strategy in the Pacific that used submarines in the 1940's to attack Imperial Japan's Sea Lines could be used to safeguard Australia's interests in 2030 and beyond. This is because the strategic geography of the South China Sea region has changed little over time, with WWII Imperial Japan and the People's Republic of China today sharing much the same strategies and vulnerabilities.

## *The South China Sea Today*

Recent tensions have involved a more assertive posture by China over its claim of the South China Sea and particularly over the contentious





*Regional arms race? - Malaysian Scorpene-class submarine KD Tunku Abdul Rakman (Photo by Chris Sattler)*

Paracel and Spratly island chain. No less than nine states have claimed sovereignty in various<sup>7</sup> areas, as it has potentially more natural gas than Saudi Arabia and more oil than Iran<sup>8</sup>. This is despite the doubt that surrounds such estimations due to the difficulty of exploration in such a politically sensitive area.

The motivation for China's policy is clear: energy security. As of 2010, 55% of its oil was imported<sup>9</sup>, more importantly, this is growing with some predictions saying that this import reliance will be as high as 78% by 2030.<sup>10</sup> That level was well beyond what the *Global Times*, a Chinese Communist Party produced tabloid, says is the "globally recognized energy security alert level of 50 percent."<sup>11</sup> For this reason, the *Global Times* states; China has expanded exploration in the South China Sea to ease dependence on Foreign Oil, which it estimates contains over 50 billion tons of crude oil and more than 20 trillion cubic meters of natural gas, with the exploitation of these deep-water resources stated in the Government's 12th Five-Year Plan (2011-15).<sup>12</sup> This would give China oil reserves second

only to Saudi Arabia, about 25 times larger than China's current oil reserves and eight times its gas reserves,<sup>13</sup> making it the world's largest. This would therefore make it an energy superpower in its own right.

China as a result of its desire for power and security has begun a new Great Game in the Asia-Pacific with an armed forces modernisation program that has sparked a region-wide arms race, accompanied by its militarisation of the South China Sea in the disputed territory. China has repeatedly not only stated it has indisputable sovereignty over the Sea, but has just as often backed up such statements with the interference of foreign vessels in the vicinity of its claims. This has resulted in numerous incidents resulting in the damage of namely Vietnamese and Filipino Oil and Gas Exploration, as well as fishing vessels. Both leaders of the respective states have clashed with Beijing over its actions, calling for China to follow the UN Convention on Laws of the Sea, which they believe cannot be used to justify their territorial claims.

China in turn has stated that its ownership of the South China

Sea is "historically proven" and is therefore non-negotiable. However to support their position under the UN Convention, it has occupied the disputed islands by setting up military outposts on the previously uninhabited islands as a means to extend its exclusive economic rights and sovereignty over the entire sea.

This policy however is not recent, with China only recently coming into enough power to implement it. It can certainly be seen to be inline with China's 1982 maritime plan, which set out a naval strategy into three geographical and chronological stages; firstly control of the water inside the first island chain, which includes the Paracel and Spratley Islands from 2000 to 2010. Secondly, from 2010 to 2020, to control the waters out to the second island chain to Guam and Indonesia, and finally from 2020 until 2040 challenge US hegemony in the Pacific and Indian oceans.<sup>14</sup>

Although it now has a close to operational aircraft carrier, China is behind schedule in terms of pure sea control. However it possesses a powerful anti-access capability in the first island chain; having numerous

## THE BATTLE FOR THE SOUTH CHINA SEA – WORLD WAR II, TODAY AND INTO THE FUTURE

Surface to Air Missile Batteries, anti-ship ballistic missiles to [hopefully] sink US Carriers, and a large and advanced submarine fleet.<sup>15</sup> In terms of this later capability at 70 boats, 21 for the South China Sea alone, China is the greatest littoral submarine operator in the world. As in late 2010 a new type of diesel-electric attack submarine (SSK) was launched, said to be of Chinese design with a advanced propulsion system possessing greater submerged endurance.<sup>16</sup> Specifically, China has built up a military presence on both Islands group, including naval infantry, 3D Radars and surface-to-air missile batteries.<sup>17</sup> It has also launched two new landing platform dock vessels designed for amphibious operations, and has based more of its naval forces south, closer to the Islands.<sup>18</sup>

The US in turn has responded subtly both diplomatically and militarily to the developing situation. China has warned the US off involving itself in the dispute, following Secretary of State Hillary Clinton's statement that the US had a "national interest" in the South China Sea and could facilitate talks.<sup>19</sup> So too it has often deployed the Japan-based carrier *USS George Washington* and her battle group into the South China Sea. Furthermore the US has increased and upgraded its presence re-committing itself to the region militarily, including raising the number of attack submarines.<sup>20</sup> With Australia's cooperation, it is also currently conducting a Global Force Posture Review to balance against a rising China. Simply, The United States does not intend to be surprised in the Pacific again.

The US Campaign in the South China Sea During World War Two

Even before World War II, it had been clear to the US Navy that the use of blockade via Submarines of Japan would be essential to any coming conflict.<sup>21</sup> However the US



Navy inflicted little damage on the Merchant fleet or the Imperial Japanese Navy in the first year of the war, for reasons including faulty torpedos, and timid submarine captains, but mainly because it had a focus on Mahanian doctrine<sup>22</sup>, with the Admirals wanting submarines to focus on 'glamorous' warships<sup>23</sup>. Success in decisive battle was to come later, especially in 1944.

It was not until 1943 following the rectification of issues in these areas, as well as in ULTRA, intelligence derived from the cracking of the 'Maru Code'<sup>24</sup>, that the attrition of Japan began by attacking its Merchant fleet, oilers and transports, otherwise known as the 'war of the Maru'<sup>25</sup>.

This resulted in a reduced flow of materials and energy to the Japanese homeland, as well as to the frontline, crippling production in nearly every industry, thereby also halting their war machine.<sup>26</sup>

This was critical as two of the objectives of the Pacific campaign were to stop Japan's enterprises overseas and to deny the homeland of food and raw materials so as to ruin their economy<sup>27</sup>. As China's exports account for nearly 40% of its GDP<sup>28</sup>, and 90% of its trade is transported by sea, it too would be vulnerable to such a campaign.<sup>29</sup>

### Common Sea Lanes, Trade and Energy Vulnerabilities

Certainly the most important attack on the Japanese logistics chain was against its oil supply which was both devastating and comprehensive as

*Seawolf-class fast-attack submarine USS Connecticut (Courtesy US Navy)*

*Torpedoed Japanese destroyer photographed through periscope of USS Wahoo or USS Nautilus, June 1942. (US Navy Historical)*



Japan was not only heavily reliant on oil for domestic production, but even more so for the operation of its military and naval forces: the 'lifeblood of the Japanese war machine'<sup>30</sup>. Thus the Munitions Minister said after the war that 'the shipping shortage and the scarcity of oil were the two main factors that assumed utmost importance in Japan's war efforts'<sup>31</sup>.

This success was critical in stopping production in Japan's advances on the front line<sup>32</sup>, but also naval operations. After 1943 Japan's lack of oil was the IJN's single most important constraint,<sup>33</sup> because it alone required 1.6 million barrels<sup>34</sup> monthly to run. It has even been suggested by a US military report that if submarines had focused on the tankers immediately after Pearl Harbor the fuel shortage would have been critical a year earlier.<sup>35</sup> This shortage in turn denied Japan the ability to win any decisive naval battle,<sup>36</sup> forcing many IJN ships off the sea and head home for fuel.<sup>37</sup> Furthermore the US Submarine Service's focus on attacking commercial vessels was not exclusive to decimating IJN vessels, especially in the successful year of 1944.

The ease at which the USN was able to disrupt Japanese oil supplies and trade should be concerning for China as it faces much the same external liabilities, especially so in its reliance on imported energy. This demonstrates that the South China Sea is never likely to be a "Chinese Lake" as seaborne supplies cannot be guaranteed, a pressing issue for China as 95% of its imported energy needs are transported by Sea<sup>38</sup>. This is all the more case for protecting stationary and difficult to defend offshore oil and gas platforms.

So too, Imperial Japan and modern China share much of the same sea lanes with China seeking to protect its oil supplies passing through the Yellow, East China and South China Sea. Imperial Japan's supplies used those

same Sea Lanes from Sumatra, Java and Borneo.<sup>39</sup>

### *South East Asia Defensive Perimeter*

Because of Japan's reliance on oil, the Japanese Army conceived the control of the South East Asian Archipelago as a way to protect the approaches to Japan, as well as to gain resources for its operations on the Chinese mainland.<sup>40</sup> With Imperial Japan's 'defensive sea wall' consisted of both a 'outer defensive perimeter' and a 'secondary line'<sup>41</sup>. The Chinese People's Liberation Army Navy has also committed itself to having free manoeuvre within the 'two island chains'<sup>42</sup>, and is seeking to block access to China via its sea lanes from the US military.<sup>43</sup> In both geography and purpose there is a striking parallel.

The viability of such defensive positions is questionable in the face of sustained attack because of their vulnerability in the disruption of these sea lanes. This was seen during the Pacific Campaign with Japan's communications inside and beyond the defensive perimeter being devastated by US Submarines, in what has been called the most successful blockade in Naval History.<sup>44</sup> Indeed Corbett observed that the principles that govern the attack and defence of trade are similar to overseas expeditions<sup>45</sup>, and that transports and the enemy's army, not his fleet, should be the "principle object."<sup>46</sup> And although the collapse of the Japanese economy was fundamental to the war effort, a major objective of the US submarine war was to cut off of supply between Japan<sup>47</sup> and their military bases, thus following a Corbettian Maritime rather than a purely Naval Strategy.

Imperial Japan's defensive perimeter plan was to prove ineffective. As by 1942 the US strategy was clearly successful during the US Guadalcanal campaign, where the Japanese army received only 10% of supplies, relative

to US forces.<sup>48</sup> Furthermore later in the war submarine attacks on the experienced 32nd and 35th Infantry divisions in the New Guinea theatre were diverted troops nearly 800 km from their destination.<sup>49</sup> This was amongst many other transport sinkings, which were the second favoured targets after oilers.<sup>50</sup> This therefore demonstrates the difficulty of amphibious operations in the South China Sea Archipelago in the face of a Submarine threat.

As stated in the ANZUS treaty there should be no 'illusion' that Australia and the US stand alone in the Pacific, and will both contribute forces to preserve collective defence in the area<sup>51</sup>. However there is nothing to say conflict in the South China Sea, especially over energy alone, is inevitable. China has stated that it is committed "to a peaceful resolution of the South China Sea issue through bilateral dialogues and consultations with related parties" and "will not resort to the use of force or the threat of force."<sup>52</sup> China and Japan have also in the past been able to agree on joint exploration of gas in the East China Sea where there are overlapping claims of Economic Exclusion Zones. China however has shown it is willing to make short terms sacrifices in soft power to guarantee a long term defence from potential foreign interference, with recent incidents and tension in the South China Sea being only symptoms of China's growing maritime assertiveness world wide, demonstrated in its deployments to Anti-Piracy operations in the Gulf of Aden and its evacuation of Chinese Nationals from Libya.

But whilst this paper has looked at the vulnerability of China, it is fundamental to understand Australia's sea lanes could come under just as much threat from blockade and submarine action. Australia too is

# THE BATTLE FOR THE SOUTH CHINA SEA – WORLD WAR II, TODAY AND INTO THE FUTURE

heavily reliant on trade passing through the South China Sea and energy imports, and must improve its ASW capability. Just as importantly the RAN or USN could employ this strategy with submarines offensively so to fight any conflict at a distance. Thus clearly justifying Australia's expansion of the Submarine Service to twelve more capable vessels.<sup>53</sup> Therefore whether during World War II, the Falklands and into the future, submarines are not simply weapons of sea denial, but the best platform in which to exercise Command of the Sea, especially through blockade, and create affect upon the land.

This can serve as a lesson today for Australia as a middle power, or on the other hand as a warning for the status quo or revisionist power alike, as Australia could easily use a similar model to interdict shipping in the Indian Ocean. The US Submarine strategy in the South China Sea was devastating to Imperial Japan because of its territorial strategy, reliance on energy imports and exposed sea lanes. The conclusion of this article then is that in dealing with a future challenge in the region, the strategies of the past can certainly provide a guide, with the burden to protect the freedom of Australia likely to fall upon the Silent Service in the Asia Pacific century, just like the last. 🌊

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# LEADING THE WAY IN ACTIVE PHASED ARRAY RADAR TECHNOLOGY



Photo courtesy of the Royal Australian Navy. Commonwealth of Australia 2011

## O B I T U A R Y

Captain David Ramsay was one of the Fleet Air Arm's finest. He did everything at jet speed, whether in the air, on the golf course, tennis court or just out and about exercising. When you work closely with someone for over 30 years and respect them as an officer and gentlemen, when they are taken from you, the loss is felt very deeply. The shock and deep loss and sadness at Captain Ramsay's passing will be felt even more keenly by his wife Janine, his children James, Nicholas and Juliette as well as the extended Ramsay and McInerney families. For close friends and former shipmates, the 'Dog' was special and will forever remain so.

Captain Ramsay had an amazing career with many highlights. There were also many challenging jobs along the way. First as a seaman officer, then a fighter pilot and Air Warfare Instructor, Naval staff officer, several sea postings, Shore and Sea Command, Royal Yacht attachment, post graduate study, back to back postings as the Naval Attaché in Indonesia, and then a return to Indonesia in a very important public service role. What more could have this Naval Officer jammed into his life?

Captain David Ramsay was born in Sydney in 1948. He was born into a naval family and with his mother and three sisters, accompanied his naval father around Australia and overseas until January 1963, when he joined the Naval College at Jervis Bay as a Junior Entry cadet midshipman. Captain Ramsay's entry into the Navy must have been a great thrill for his father, who eventually retired from the Navy as a highly decorated Commodore who went on to be the Governor of Queensland from April 1977 to July 1985. After graduation in 1967, David served as a Midshipman in HMA Ships *Yarra* and *Sydney*, spending most of the year in the Far East.

As a Sub-Lieutenant, David experienced time in the UK and was

# CAPTAIN DAVID JOHN RAMSAY

## OAM, RANR

*David J Ramsay*

### AKA 'CHECKMATE 1 – RAMSDOG'

in the last group of Australians to undergo training at Dartmouth where he shone as a young seaman officer. He demonstrated his enormous potential and was awarded the Queen's medal in 1970. Having been dux of his year at Dartmouth, Captain Ramsay completed another nine months of operations and weapons courses in the Portsmouth area. It must have been during this time David became fixated on British car technology – his beloved Rovers.

On his return to Australia, David completed his Bridge Watch keeping Certificate training in *HMAS Brisbane* during her 1971 tour of duty as the last RAN Ship to operate with the US Seventh Fleet in Vietnam.

In 1972 Captain Ramsay underwent flying training with the RAAF displaying his superior flying skills by graduating dux of 84 Pilots Course. I was fortunate to have been on the Pilots course behind David, and whilst there was a rank differential between us, he was always extremely supportive and a great role model. On his return to the Naval Air Station, Captain Ramsay started his fast and furious flying career with the Fleet Air Arm, completing his operational flying training on Skyhawk fighter/bomber aircraft in December 1973. Captain Ramsay served on 805 front line squadron embarked in *HMAS Melbourne* and then underwent the Air Warfare Instructor course, teaching OFT students the finer points in air combat and weapons delivery techniques. He was a natural instructor. Captain Ramsay loved instructing and the students loved him.

Captain Ramsay had a brief stint



rubbing shoulders with Royalty as the RAN Contingent Officer in *HMY Britannia* during the Royal Tour. He then was posted to 805 Squadron and embarked in *HMAS Melbourne* for a memorable Spithead Review deployment to the UK. On return to Australia David was posted to *RANAS Albatross* as the Station Air Warfare Instructor.

In 1979 Captain Ramsay was posted to exchange duty with the Royal Navy flying Sea Harriers during the introduction to service of that aircraft. I had the pleasure of instructing David on the finer points of hovering in a Wessex helicopter prior to his departure. He again displayed his outstanding flying ability and professionalism.

After completing his embarked time and exchange service, the Royal Navy requested he stay for an additional six months to continue assisting training and trials during and after the Falkland's conflict. He returned with the family to Nowra as Commander (Air) in 1983 until the Government's decision to scrap the fixed wing element of the Fleet Air Arm and retired his favourite toys, the Macchi and Skyhawk jets. I know this was a tough time for David and many of his fixed wing colleagues.

# O B I T U A R Y

David was then posted as Executive Officer *HMAS Success* bringing her into naval service. This was a challenging posting which required the ship to spend many months alongside conducting engineering acceptance trials and testing.

Captain Ramsay then had a 12 month posting as the Director of Sailors' Posting prior to a promotion and posting to *HMAS Creswell* as the Commanding Officer. It was during this posting that I also was posted to *Creswell* as Captain Ramsay's Executive Officer, the first and possibly last time two birdies ran a Naval Establishment. It was an absolute privilege to work closely with David. We made some big inroads into junior officer training and relationships with the newly formed Australian Defence Force Academy. Our families enjoyed the *Creswell* community life and activities. I have many fond memories of some of the high jinx David and I enjoyed whilst

we served together in *Creswell*. The time working for David confirmed my previous opinion of this fine naval officer and gentlemen.

David was then posted as Commanding Officer *Success*, followed by a subsequent change in career direction, and post-graduate language training and back to back posting as the Naval Attaché in Indonesia. These were challenging and demanding times with Australia rebuilding international ties with Indonesia, just prior to the East Timor confrontation.

In 1997, Captain Ramsay was awarded the Medal of the Order of Australia for meritorious service to Naval Aviation leading to the formation of the current Commander Fleet Air Arm organisation. After transferring to the Naval Reserve in 2001, David conducted a study that saved the FAA Museum from being disestablished and many of his recommendations to restructure and resource the museum

convinced the Chief of Navy at the time not to cut ties with the Fleet Air Arm Museum.

Captain Ramsay's last working challenge brought all his skills to the fore, including his Indonesian language skills, insight into Asian culture, aviation experience and astute staff skills. The Department of Infrastructure and Transport benefited from David's presence in Indonesia, where he worked with distinction until his untimely passing on 4 Sep 2012. So much so were his skills appreciated, Captain Ramsay was awarded the Secretary's Award for excellence in 2011.

Thank you Captain David Ramsay for your contribution as a Naval Officer and excelling at every task you undertook. Your sense of humour, humility, skill and professionalism were unsurpassed. Combined with your devotion to family, you were one of the finest officers and gentlemen I have had the privilege to serve with in the Australian Defence Force. God bless you and keep the formation tight. 🇦🇺

*"When once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return"*  
– Smithsonian publication

Commodore Geoff Ledger DSC, AM RAN (Ret'd)

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# A Middling Power

## What is the ADF meant to do, exactly?

BY HUGH WHITE

In trying to explain the purpose of our armed forces, defence ministers often fall back on that plangent phrase “the defence of Australia.” In a recent speech to the Australian Strategic Policy Institute (ASPI), Defence Minister Stephen Smith reminded his audience that the 2009 Defence White Paper “underlined that Australia’s most basic strategic interest remained the defence of Australia against direct armed attack”. He then foreshadowed that the next White Paper, promised some time next year, would come to the same conclusion.

This appealingly simple idea, that the reason we have a defence force is to defend ourselves against direct attack, has been central to defence policy for at least the past 40 years, and the public seems to accept it. But few people in government or Defence think that Australia faces any credible risk of major military attack, and fewer still believe we could defend ourselves if we did. As a result, neither the government nor Defence has taken what is supposed to be the main task of the ADF very seriously, which goes a long way to explaining why Defence has been lurching from one arms procurement or maintenance fiasco to another.

Of course, apart from defending our shores, the ADF has always had something to do – peacekeeping in the Middle East, nation-building in East Timor, tsunami relief in Indonesia or fighting bushfires in Victoria – but these aren’t reasons enough to have a defence force. This financial year Australians are spending \$24.2 billion on defence; that’s more than \$1000 for each Australian man, woman and child. We don’t willingly spend those sums just to lend a hand in Somalia or



support an election in Cambodia, or even to try to reconstruct Afghanistan. We only spend that kind of money to protect ourselves. Decade after decade, the biggest share of the defence budget has gone on capabilities, such as fighter jets, major warships, submarines and heavily equipped land forces, that are irrelevant to the lighter tasks we have been sending the ADF off to do. If these capabilities make sense at all, it would only be in fighting a major war. Yet hardly anyone believes this is a realistic prospect, let alone a winnable one. No wonder Defence doesn’t seem to know what it’s doing.

This kind of muddle is not new. Australians first started thinking about their security in the 1880s, when the rise of powers like Germany, Russia and the United States started to challenge British power. Until then, they had blithely assumed that the Royal Navy would always be on hand to defend them. As Britain’s power waned, Australians began to realise not only

that the mother country’s protection could not be taken for granted, but also that they could not defend themselves without Britain’s help: the continent was too big, the population too small, and their potentially threatening neighbours, though poor, were too numerous to be fended off without aid.

This dilemma racked those charged with developing Australia’s defence policy. We couldn’t depend on our allies to defend us because we couldn’t be sure they would be willing or able to send forces halfway around the world when crisis struck. Yet we had to depend on our allies, because we could not defend the continent alone. These conflicting realities drove us in two separate directions – to build forces to support our allies wherever they fought, in the hope they would reciprocate when we needed them, and to do what we could to defend the continent unaided. In trying to do a bit of both, we ended up doing neither well.

In the 1970s, things started getting

*Once a two-carrier Navy... HMAS Melbourne, with Westland Wessex flying, escorts Sydney on passage to Vietnam. (Courtesy RAN)*

## *A Middling Power*

### *What is the ADF meant to do, exactly?*

easier. China seemed less a communist menace and more a promising partner. Indonesia stopped being so threatening and became a mostly responsible neighbour. Above all, surprisingly, the US emerged from failure in Vietnam as the uncontested leader of Asia. After Nixon's visit to China in 1972, Mao accepted US primacy in return for Washington's recognition of Beijing's communist government. The likelihood of a major direct attack on Australia decreased, and we were confident that if any serious threat did develop, the US would come to help. Consequently, Australia felt more secure from direct armed attack than at any time since the Pax Britannica had begun to fray in the 1880s.

All this emboldened Australia to take responsibility for its own defence. In November 1976, the Fraser government tabled a White Paper that said we should be able to defend the continent without direct combat support from our allies. Self-reliance in the defence of Australia has been the main tenet of our defence policy ever since.

But defence against whom? The 1976 White Paper boldly predicted that the powers of Asia – India, China and Japan – would not pose any strategic problems for Australia, and that our defence policy could therefore afford to ignore them. “No more than the former Great Powers of Europe,” it stated, “can we expect these powers individually to play a large military role in strategic developments directly affecting Australian security in the foreseeable future.” True enough, none of the Asian powers was foolish enough to risk threatening a close American ally. With Asia's main players off the board, we only had to be able to defend ourselves against our immediate neighbours – and Indonesia was the only conceivable

adversary.

This made self-reliance rather easy. Indonesia had a large army, but weak naval and air forces. Australia's navy and air force were always superior, thanks mainly to Australia's much greater GDP.

But “the foreseeable future” is now past. In 1976, no one expected the Asian century, or foresaw that within 40 years China would be on the verge of overtaking the US economy, and India would be following fast in its footsteps. No one could have foreseen that Indonesia's GDP would surpass Australia's, and that the country would be spoken of as a great power in its own right. These things have come to pass, sweeping away the assumptions that have framed Australia's defence policy for more than a generation. We haven't really escaped the old dilemma between defending ourselves and relying on distant allies; we have just enjoyed respite from it, and now the holiday is over.

China's rise, and the broader ascendancy of Asia, is the biggest shift in the distribution of global power in at least a century, and the biggest shift in the balance of strategic forces in our region since Australia was settled by Europeans. The implications for Australia's defence are fairly clear, and very significant. Firstly, the era of Asian stability based on uncontested American primacy has come to an end. A new, significantly different yet stable order in Asia may emerge, but we can be far from sure that this will happen, or that it will last. We therefore face a much greater risk of major-power rivalry and conflict in Asia over the coming decades. Secondly, as the economies of China and other countries continue to grow, the US will demand more support from its allies, including Australia, especially if it aims to retain its power in Asia. Thirdly, there remains a significant risk that

in a crisis the US would not be able or willing to support Australia. And lastly, if Indonesia realises its potential, we will for the first time face on our doorstep a great power, one with an economy much larger than our own and the capacity to build formidable air and naval forces.

Just as we need more than ever to rely on our allies for security, it becomes less and less certain that we can.

Finding a way through this maze is the task of the Gillard government's new defence White Paper, due in 2013. The 2009 White Paper, released by Kevin Rudd, tried and failed. Though it went further than previous attempts in describing the trends in Australia's strategic circumstances, the government ducked taking any serious decisions by assuming nothing much would change before 2030. They talked big about Australia as a “middle power” in the Asian century, but kept plans for new capabilities almost exactly where John Howard had left them. Since then, even these modest plans have been filleted by repeated budget cuts. The 2012–13 budget is 10% below last year's in real terms. All the headlines about plans to double the submarine fleet from six boats to 12 overlooked the key fact that 20 years from now we will still have only six boats, and we won't have 12 until almost 2050.

Next year's White Paper will need to do much better if Australia's defence policy is to respond to the challenges of the Asian century. It must start by offering a far more sophisticated account of the risks we might face – especially from China. In the 2009 White Paper, and in things he said publicly and privately as prime minister, Rudd gave the impression that he saw China's growing power as a threat, but it is not that simple. At present, nothing in China's policy and



The new White Paper will also need to recognise how fast these

Most importantly, the new White Paper must decide whether Australia will hang on to the objective we set ourselves in the 1970s – that of defending the continent independently against a direct military attack – in circumstances where a threat from a major power can no longer be as easily dismissed. The alternative is that we rely ever more deeply on the US, even as its relative power in Asia declines. This is perhaps the most fundamental strategic question we face, testing our seriousness about being a middle power. It will take real political courage and leadership, as well as

We can define a middle power as able to stand up to one major power without relying on another. So should we be one? To answer this we need to weigh up the costs of building the armed forces we'd need against the benefits of reducing risk. Looking at risk first, Australia is in many ways an intrinsically secure country. We are – or at least have been – far from the major centres of world power, with neighbours much weaker than us. We possess a huge territory not easily dominated, and we are surrounded by vast oceans. Add to this that we have had the region's dominant military power as our close ally, and Australia seems very unlikely to be attacked,

## *A Middling Power*

### *What is the ADF meant to do, exactly?*

which is precisely why for the past 40 years “the defence of Australia” has seemed such a hollow policy precept.

In the next 40 years, our island-continent geography will continue to ensure that only radical changes in the political, economic and strategic settings in Asia will substantially increase the risk to Australia. But such changes are indeed underway. If Indonesia fulfils its potential to become a major power, distance will do less to protect us than it has done. Other powers will be much stronger than they have been, and more inclined to compete with one another, so it follows that the risks of us being drawn into major-power rivalry and conflict must also be higher. Australia’s strategic risks will also depend on how we behave as the region evolves. Our policies towards our neighbours will make a big difference in how we’re viewed. It is not clear that we really understand this yet.

Perhaps the most we can say at this stage is that, while the risk of direct attack on Australia will remain quite low in the Asian century, it will nonetheless be higher than we have known for several generations. We should try to reduce this risk through diplomacy and other non-military means, particularly by promoting a stable regional order that minimises great-power rivalry. But we cannot assume this alone will work, so we must at least consider building the armed forces we would need to defend ourselves from a major power without relying on America.

What kinds of forces we would need exactly, and how much these might cost, are then *the* critical questions of military strategy for Australia’s defence. We would expect the ADF and the Defence Department to devote much effort to answering them. My impression is that they have done no such thing. Like the rest of us, they find it hard

to take the possibility seriously, and have not yet woken up to how the changing strategic setting makes it essential that they do so. Designing large-scale campaigns is not the ADF’s kind of thing. Australia’s military has always been focused on tactics – the business of fighting battles on the ground – an area in which they excel. It has been happy to leave higher level questions, such as deciding which battles to fight, to our allies. The ADF does not feel at home with these questions, and I suspect even feels intimidated by them. It seems uneasy about taking on the responsibility for defending Australia independently, and reluctant to open up discussion that might entail significant changes to the kinds of forces we require. The ADF would rather stick to what it knows, and successive ministers, with no appetite for hard questions and harder answers, have been happy to leave them be.

To most of us, the idea that Australia could stand up alone against a major power seems far-fetched. Our experience as part of global coalitions in the two world wars makes us think that success in a conflict means vanquishing the enemy and occupying their territory. Against a major power, Australia is never going to be able to do that independently. The most we could hope to achieve would be to raise the costs and risks of attacking Australia to the point where it is not worth an enemy’s while. But, fortunately, that may not be as hard as we might think.

There are two ways it could be done. One approach would be to threaten an adversary’s own country with a direct attack – “to rip an arm off any major Asian power that sought to attack Australia” as my old friend and colleague Ross Babbage so colourfully put it. This defence might suit a nuclear power, but not

Australia. The other approach would be to attack directly the forces being projected towards us. This looks inherently easier, and less likely to lead to escalation. Most importantly, it would allow us to exploit the fact that it is much easier to stop someone else projecting power over the sea than it is to project power oneself.

Here, we need to distinguish what naval strategists call ‘sea control’ from ‘sea denial’. Sea control is the ability to protect your own ships by preventing others from attacking them, and is needed to safely advance by sea. Sea denial is the ability to attack an enemy’s ships, and thus deprive it of sea control. The most crucial operational fact for the defence of Australia is that sea denial is much easier to achieve than sea control. This hasn’t always been so. Back in the days when Britannia ruled the waves, protecting your own ships and attacking the enemy’s were almost two sides of the same coin. Technology has now shifted the advantage to sea denial, and this trend shows no sign of reversing. This means Australia should be able to achieve sea denial against even a major power without *too* much trouble, if we focus our efforts on it single-mindedly.

Sea denial has two essential steps: finding ships and sinking them. Finding the ships means building an effective and reliable surveillance system capable of covering Australia’s air and sea approaches thousands of kilometres from our shores. We already have some of the key elements, including the JORN over-the-horizon radar system, and technological innovations should make it easier to enhance this over the next few decades. In the age of Google Earth, a ship moving slowly over the surface of the sea is not that hard to find. Sinking ships is not that difficult either. Today’s torpedoes

and missiles make ships easy to target and very hard to defend. Indeed, most of the technologies in today's warships are devoted to self-protection rather than attack.

The challenge is to carry the torpedoes or missiles within firing range. It makes no sense these days to carry them in a warship, which is itself both expensive and vulnerable. Instead, they are most effectively carried in submarines and aircraft. Within range of airbases, aircraft are cheaper, but beyond that range – anything over a few hundred kilometres – submarines are the sea-denial platform *par excellence*, because they are so difficult to find. That makes them perhaps the most important single capability for the independent defence of Australia, because the further from our shores we can start to deny the sea to an adversary, the further its costs and risks rise. What's more, over coming decades, submarines might be the only way we can project power against significant military forces in the Western Pacific. The advantages of sea denial over sea control only work in our favour so long as we are not trying to project power using ships ourselves. Australia has no serious chance of achieving sea control against any major Asian power, even in our own immediate maritime approaches. That means if we want the ability to use armed forces to protect our wider strategic interests in a major-power conflict, submarines could be the only option we have.

This is why the government's failure to make the new submarine project work is so serious. Most of the myriad problems have come about because the government has no coherent idea about what the submarine fleet is supposed to do. In fact, the project has been driven not by strategic imperatives but by commercial concerns about where the boats will be designed and built. This

has shaped the debates that have raged over whether the boats should be large or small, designed here or overseas, to a new design or off the shelf. Little or no thought has been given to the two most critical issues: numbers and timing. Once we start to ask how Australia might defend itself with a sea-denial campaign, it becomes clear that we need at least double the 12 submarines currently being planned. At the same time, there is no need for the exotic and expensive options that are adding so much to the cost, risk and schedule of the proposal. What Australia needs, if we decide to invest in the capacity for independent defence over coming decades, is large numbers of good, quiet, lethal boats optimised solely for the task of sinking ships. And we need them soon.

A big fleet of submarines like this would cost a great deal of money, and would only be one element of a range of capabilities needed for the independent defence of Australia. Effective denial of our air and sea approaches would require a much larger air force than we have been planning – perhaps 200 front-line combat aircraft rather than the 100 being considered. It would also, perhaps surprisingly, require a somewhat larger and more heavily equipped army, because a maritime-denial posture relies on there being a substantial land presence to drive up the scale of forces the enemy has to project. So the ADF needed for our independent defence would look very different from the force we have known for the past 40 years, or indeed since World War II.

Obviously, building and operating this force would make unprecedented demands on the ADF and the department. We could hardly expect the outfit that has failed to crew and maintain a fleet of six submarines to do any better with 24 or more. But these problems do not reflect any inherent

weakness in Australia's demography or skills base. Although it is crystal clear that our current defence force and department aren't up to the task, as long as we can get access to key technologies, Australia has the capacity to build and operate the kinds of forces we would need to defend ourselves. It would simply take a lot of work.

Which brings us back to money. Whether we should build the forces to defend ourselves independently in the Asian century depends on how much it would cost. New technologies such as drones could help to keep some costs down eventually, but there's no dodging the fact that independent defence will cost a lot of money – certainly a lot more than we have been spending recently. There is, however, one big offset – the potential for savings. We waste a lot of money in defence in ways large and small, but the biggest drain of all is the billions spent on capabilities we do not need.

The Gillard government is currently building three air warfare destroyers (AWDs) at a cost of \$8 billion. We simply do not need them. We do need smaller, cheaper warships, such as the Anzac frigates for low-level operations, but the AWDs are equipped at great cost for high-end naval battles. They are supposed to escort and protect the huge new amphibious ships in which our army, like US marines, might be deployed to assault the territory of an enemy in a major war. Yet this scenario is fanciful. Even with the AWDs, we have no chance of achieving sea control against a capable enemy. Just as it is easy for us to achieve sea denial against an adversary, it is easy for them to deny us. The amphibious ships would stand too high a chance of being sunk with all troops on board to ever be put to sea, and even if they went to sea and found their way ashore, a couple of thousand soldiers would have little if any strategic effect. In any major

## *A Middling Power* *What is the ADF meant to do, exactly?*

conflict, amphibious assault is simply not a credible option for Australia, and in low-level contingencies amphibious forces would not need AWDs to protect them.

This appalling waste of money and effort is happening because the Howard government ordered these ships, on the advice of Defence, without anyone apparently having thought through whether these would contribute cost-effectively to achieving Australia's strategic objectives.

Yet even if we cease wasting money, an independent defence capacity is going to be expensive. It is impossible to give a precise figure, but if we were careful to spend money only on the capabilities we really needed, it would cost between 3 and 4% of GDP. For the last 20 years, we have spent an average of about 2% of GDP on defence, so that means a steep increase. But to put it in historical perspective, during the 1950s

and '60s we spent an average of 3.3% of GDP, so this would take us back to what we spent before the great strategic changes of the early 1970s allowed us, for a time, to ignore the possibility of conflict with great powers.

Australia could afford this level of defence spending. It would mean higher taxes, but our tax levels are still quite low compared to those of other countries. Nonetheless, to go down this path would be a huge decision. Despite what the industry lobbyists say, defence spending is in the end a form of consumption, not an investment. We should only spend this much money if the strategic risks of the Asian century are grave. It is quite possible that they will be. This is what the next defence White Paper must assess. For the first time in a very long period, our political leaders are going to have to take defence seriously. ✎



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# United Kingdom: National Involvement in the Indian Ocean Region

BY FAY CLARKE, FUTURE DIRECTIONS INTERNATIONAL PTY LTD RESEARCH ASSISTANT

## KEY POINTS

- Conscious of the current straitened economic circumstances, the UK is pursuing “commercial diplomacy” by seeking new markets in burgeoning Indian Ocean region economies.
- Within the Indian Ocean region, the UK’s diplomatic resources have been strategically pivoted towards the emerging economic “powerhouses”.
- The Indian Ocean continues to be vital to British strategic maritime interests. The UK maintains a naval presence within the Indian Ocean region and plays a leading role in counter-piracy and maritime security efforts.
- The United Kingdom is committed to promoting its values abroad and uses its former colonial links to help forge and strengthen relationships.

## SUMMARY

Though no longer an empire, the United Kingdom still maintains an interest in the Indian Ocean region. As a global power, the UK sees the Indian Ocean as critical to its own economic success. In addition to security interests, the strategy of “commercial diplomacy”, which taps into the rise of a number of Indo-Pacific economies, the continuing geostrategic relevance of the Middle East and longstanding Commonwealth links from a colonial past in Africa, provide the basis for the UK’s national involvement in the Indian Ocean region.

Archipelago and three islands formerly belonging to the Seychelles) is the only remaining UK territory within the region although, according to the 2006 Brits Abroad study by the Institute for Public Policy Research, there are over an estimated 1.9 million British persons living in the greater Indian Ocean region. The BIOT atoll of Diego Garcia is leased to the United States to house its major Indian Ocean naval base. Diego Garcia is strategically vital: it sits at the centre of the Indian Ocean, offering roughly equidistant access to all major shipping lanes and to the rim and island states of the region. The US

lease is due to expire in 2016, with the possibility of a 20-year extension built into the original agreement. Despite overcrowding concerns, given the current US strategic pivot towards the Indo-Pacific, it seems unlikely that interest in Diego Garcia will diminish in the future.

The UK has important commercial interests in the Indian Ocean. In part due to the legacy of the primarily mercantile British Empire, the UK has a sizeable commercial shipping industry operating within the region. Total British shipping revenue for 2010 stood at £12.6 billion (\$19.3 billion),

*US FA-18F Super Hornets (foreground) fly in formation with two Indian Navy Sea Harriers, bottom, and two Indian Air Force Jaguars, right, over Indian Navy aircraft carrier INS Viraat (Courtesy US Navy)*

## ANALYSIS

### Security and Geostrategic Interests

For much of the twentieth-century, the United Kingdom was the preeminent power in the Indian Ocean, a region considered crucial to the commercial activities of the British Empire. Today, the strategic presence of the UK is on a considerably diminished scale and Sino-India and Sino-American rivalries (real or perceived) tend to overshadow the strategic presence of other actors in the region. The British Indian Ocean Territory (the BIOT, comprising the Chagos



## United Kingdom: National Involvement in the Indian Ocean Region

of which almost £9 billion (\$13.8 billion) came from overseas trading, much of which would be conducted in the Indian Ocean region. The Indian Ocean region is vital to Britain's strategic maritime interests, and the UK is a major stakeholder in promoting maritime security. Admiral Sir Trevor Soar, the Royal Navy's former Commander-in-Chief Fleet, confirmed the strategic importance of the Indian Ocean to the UK, when he told Future Directions International that, out of the 25 per cent of the Royal Navy units that are deployed at any one time, it is likely that over 50 per cent of the Navy's manpower and assets will be located in the Indian Ocean.

The UK plays a leading role in multilateral counter-piracy efforts in regional danger zones, particularly around Somalia and the Gulf of Aden. The UK is a significant contributor to the anti-terrorism and anti-piracy Combined Task Forces 150 and 151. The Royal Navy currently provides the Commander and headquarters for the European Union's Operation *Atalanta*, charged with combating Somali piracy. In October 2011, London authorised the carrying of armed guards by British merchant vessels transiting the Gulf of Aden, Strait of Hormuz and other "chokepoints" along major sea lanes. The United Kingdom has also capitalised on its Commonwealth connections to broker co-operation with countries such as Mauritius, the Seychelles and Tanzania, as well as the self-declared state of Somaliland to prosecute suspected pirates and to imprison those convicted of piracy.

The United Kingdom, like the US and EU, has a considerable stake in restoring stability to Somalia and preventing destabilisation from spreading to geo-strategically and commercially significant states along the East African coast. The UK remains the largest foreign direct investor

in its former colony of Kenya: a neighbour of Somalia and regional "diplomatic hub" for the Foreign and Commonwealth Office (FCO).<sup>1</sup>

Whitehall recognises that Somali piracy 'cannot be solved at sea' and has led multilateral diplomatic efforts to support the return of stable governance to Somalia. In February 2012, the FCO hosted the London Conference on Somalia, attended by over 50 states, to plan future nation-building, counter-piracy and humanitarian relief efforts in Somalia. UK support for the African Union force combating al-Shabaab militancy was underscored and, that same month, a British Ambassador to Somalia was appointed for the first time since the fall of former dictator Mohammed Siad Barre in 1991. The September 2012 election of Somali President Hassan Mohamud and a new parliament was greeted with cautious optimism by the UK, as a key member of the international community backing the 'roadmap to end the transition.'

### TRADE AND DIPLOMACY: "COMMERCIAL DIPLOMACY"

Trade and commercial interests are now more than ever positioned at the centre of the United Kingdom's diplomatic engagement with the Indian Ocean region. In 2011, the British Government launched a new strategy of "commercial diplomacy" as part of

1 In addition, in March 2012, a UK firm made the first ever discovery of oil in north-western Kenya, presenting a prime opportunity for increased British FDI in the East African coastal state. 'Kenya Strikes Oil For First Time in History', *Economy Watch*, 27 March 2012. <http://www.economywatch.com/in-the-news/kenya-strikes-oil-for-first-time-in-history.27-03.html>



its efforts to "rebalance" the flagging UK economy through international trade and investment. The ongoing economic instability of the Eurozone (Britain's most important export market) and the slowdown of Britain's own national growth, in addition to a weakened ability to project influence abroad, have led the UK to seek new markets and pursue opportunities within the growing economies of the Indian Ocean region.

While there has been a general reduction of the British diplomatic presence worldwide following the implementation of government-wide austerity measures, there has been a clear strategic reorientation and streamlining toward the economic 'powerhouses of the near future.'<sup>2</sup> The adoption of "commercial diplomacy" has seen the creation of the FCO Business Charter and the UK Trade and Investment portfolio, which identifies a number of Indian Ocean economies, including India, Indonesia, Malaysia and Singapore, as key high-growth 'target markets.'<sup>3</sup> British exports to Indonesia alone, for instance, increased by 44 per cent in 2011.

2 Jeremy Browne MP, 'Navigating the Emerging Order: the UK and the Emerging Powers'. Transcript of speech given at Chatham House, 20 July 2011. <<http://www.chathamhouse.org/sites/default/files/public/Meetings/Meeting%20Transcripts/200711browne.pdf>>.

3 UK Trade and Investment, 18 May 2010, 'High Growth Markets: Be a Part of Tomorrow's World'. <<http://www.ukti.gov.uk/uktihome/item/108062.html>>.

*Royal Navy Multirole Hydrographic and Oceanographic Survey Vessel HMS Echo (H87)-photo by Michael Nitz*



India and Indonesia are seen as particularly important and, in recent years, London has commenced annual strategic business summits with them. The bilateral UK-Indonesia Partnership forum covers the key policy areas of foreign policy and international security issues, trade and investment, climate change and sustainable growth and education. The range of issues reflects not only the commercial diplomacy strategy, but also the UK's interests in regional stability and supporting democracy in Indonesia as part of a strengthened ASEAN regime. Britain also views its highly creative and productive science and technology industries as a critical asset, with research and development an important "pull factor" for UK trade in the competitive Indian Ocean marketplace.

The UK has also pursued "commercial diplomacy" with

growing Indian Ocean economies through multilateral means. London is spearheading efforts to negotiate European Union Free Trade Agreements with Singapore and India, and hopes to bring both sets of talks to a conclusion by the end of 2012. The UK was also a major player in bringing about the suspension of EU economic sanctions (excepting the continuing ban on arms sales) against Burma in April 2012. Accompanied by a business delegation, Prime Minister David Cameron became the first Western leader to visit Burma, during a four-day scoping tour of Burma, Malaysia, Indonesia and Japan taken shortly before EU sanctions were suspended. The trip also demonstrated the close alignment of British business and diplomatic interests in the region, with the UK eager to explore economic opportunities within Burma but reiterating its firm commitment to

support for human rights and political freedoms, including the release of political prisoners, as a necessary precondition for the strengthening of bilateral ties between the two countries.

The UK has sought to consolidate and expand its already strong economic ties to the wealthy Persian Gulf states. In recent years, the UK has become more reliant on foreign energy imports as domestic natural gas and crude oil production declines; it is now a net energy importer. It is critical for the UK to maintain friendly relations with international suppliers, rather than risk restricted access to long-term supply in an age of austerity. Qatar, for instance, accounts for 60 per cent of British LPG imports. Qatar is also an important bilateral investment partner for the UK and a key stakeholder in the energy trade within the Indian Ocean region.

It is not just energy that is critical to UK interests within the Gulf. The

*Sailors chock and chain an Indian Navy Chetak helicopter to the flight deck of the guided-missile destroyer USS Fitzgerald as amphibious command ship USS Blue Ridge passes behind (USN photo)*

## United Kingdom: National Involvement in the Indian Ocean Region

area has lucrative markets for UK exports in financial, training and educational services, plus specialist technical products including defence, engineering and industrial equipment. Saudi Arabia is the UK's largest market for goods and services outside of the OECD and Britain's most significant trading partner in the Middle East. Oman and Kuwait are also significant markets for Britain. British arms manufacturers hold major contracts in Kuwait and Saudi Arabia, while the UK is the largest foreign investor in Oman, with high levels of bilateral trade in addition to defence co-operation and educational exchanges.

London maintains a naval presence in Bahrain, which hosts the United Kingdom Maritime Component Command (UKMCC) headquarters and the Royal Navy's *Armilla* Patrol, tasked with ensuring the safety of British vessels in the Persian Gulf and Arabian Sea including minehunters, submarines and surface combatants. Bahrain purchased nearly £3 million (\$4.6 million) worth of military equipment in the April-June quarter of 2012. Additionally, British Prime Minister David Cameron has recently closed deals with Saudi Arabia and the United Arab Emirates on the sale of the Eurofighter Typhoon. These advanced aircraft are being purchased to replace the ageing Panavia *Tornado*, first introduced in 1979.

As lucrative as its trade relations with the Gulf States are, the UK may not be able to take them for granted. The Gulf States are also seeking increased commercial engagement with emerging and established Asian powerhouses such as India, South Korea and Japan and those relationships may come to take priority over those with "Old World" powers such as the UK.

Britain and Australia maintain a strong relationship, characterised by

healthy two-way trade, cultural and historical ties and knowledge-sharing, with numerous bilateral agreements in health, law, science and technology. Recreational travel remains the primary contributor to the services trade on both sides. Amongst the major Australian exports to the UK are gold (totalling \$4.5 billion in 2011-12), coal and lead. The main UK exports to Australia include medicines, platinum, silver, printed materials and passenger motor vehicles. Australia is seen as a safe market for British investment and an attractive base for Indo-Pacific regional operations, primarily in the infrastructure, pharmaceuticals and energy industries. The Department of Foreign Affairs and Trade notes that the UK is the second-largest source of total foreign investment in Australia and the second-largest source of foreign direct investment in Australia, behind only the United States.<sup>4</sup>

UK investment in Australia has proved resilient despite the global economic slowdown. Following the post-2008 downturn which had a significant impact upon the UK, British FDI into Australia increased by \$1.8 billion in 2009. The UK currently exports more to Australia than it does to India or China (although Australia is only Britain's thirty-third largest source of imports).<sup>5</sup> With its focus on emerging economic powers, the UK's new "commercial diplomacy" strategy may alter the proportion of British exports to Australia.

The United Kingdom and Australia have a long history of defence and security co-operation. Since 2006,

<sup>4</sup> Australian investment in the UK is considerable, with over 1,500 Australian companies active in Britain, largely in the financial services sector, but also including dual-listed resources companies, such as BHP Billiton and Rio Tinto. 'United Kingdom Country Brief', DFAT, March 2012.

<sup>5</sup> Foreign and Commonwealth Office, 'Country Profile: Australia' <http://www.fco.gov.uk/en/travel-and-living-abroad/travel-advice-by-country/country-profile/asia-oceania/australia?profile=all>

the two countries have held regular AUKMIN defence and foreign policy summits, the fourth of which took place in January 2012. Major items of discussion included constructive engagement with China, reform in Burma, counter-piracy efforts (and the increased role of India in such operations) and Australian support for UK engagement in the Indo-Pacific via the Five Power Defence Arrangements (FPDA). The FPDA brings together the UK, Australia, Singapore, Malaysia and New Zealand and has remained in place for over 40 years, with joint training exercises held each year.<sup>6</sup> In common with the United States, New Zealand and Canada, the UK and Australia are also members of a number of military interoperability programmes that can, at times, incorporate an Indian Ocean aspect: the ABCA (American, British, Canadian, Australian and New Zealand) Armies Programme, the naval AUSCANNZUKUS (Australia, Canada, New Zealand, United Kingdom, and United States), ASIC (the Air and Space Interoperability Council), the military scientific and technological Technical Co-operation Programme and intelligence agency linkages.

A bilateral UK-Australia National Security Partnership in 2009 pledged to further co-operation on intelligence sharing and responses to emerging security challenges. In 2011, a Memorandum of Understanding pledged further collaboration in science and innovation to aid counter-terrorism and national security measures. Australia remains an **important market for UK defence**

<sup>6</sup> The FPDA entered into force in 1971 as a security guarantee for Singapore and Malaysia and has continued since. Despite no longer having a major military presence in the region, the UK retains assets in Singapore including a refuelling depot at the Sembawang dockyard, which also hosts warships from the Australian, New Zealand and United States navies.

exports. Given their considerable history of military, defence and security co-operation, in addition to Australia's strategic position in the Indo-Pacific region, bilateral engagement between the UK and Australia in these areas may increase over the coming "Asian Century". On the other hand, the UK does not yet actively participate in major multilateral maritime security initiatives such as the Indian-initiated Indian Ocean Naval Symposium, or take part in the Exercise *Malabar* operations, which Australia, India and Singapore all do.

### CULTURAL INTERESTS

The United Kingdom offers a number of special higher educational opportunities, particularly to Commonwealth students, through initiatives such as the Chevening, Marshall and Commonwealth Scholarships. Large-scale migration to the UK from Commonwealth countries in the Indian Ocean region has enhanced cultural ties; Indian migrants constitute the largest ethnic minority resident in the UK. Indian nationals are

a continued source of skilled migration to Britain, and currently 60 per cent of intra-company transferees to the UK are from India. The importance of these links with India is underscored by the strong support of the UK for the proposed European Union FTA with India.

The United Kingdom is also keen to promote its values alongside diplomatic, commercial and strategic engagement with the Indian Ocean region. As such, London has been a firm supporter of democratisation and political freedoms in countries such as Burma, Somalia and Egypt. Prime Minister David Cameron was the first foreign head of state to visit Egypt following the Arab Spring. The Department for International Development also offers considerable aid initiatives to various Indian Ocean countries, including India, Kenya, Bangladesh and Burma and offers incentives to support the UK's regional policy objectives.

### CONCLUSION

The Indian Ocean region remains

vital to the United Kingdom's maritime strategic interests and the UK will continue to play an active role in regional security efforts, both unilaterally and multilaterally. Seeking to revive its own flagging economy, the United Kingdom will continue to pursue new markets through such strategies as "commercial diplomacy". As a global power, the UK may find it has increasingly to compete with influential rising regional powers to secure opportunities and strengthen existing relationships, despite retaining strong ties to many former colonies. The United Kingdom is, however, well placed to offer mutually-beneficial opportunities in trade, defence, education and skills training and knowledge-sharing in specialist areas of science and technology, to help achieve its commercial goals in the Indian Ocean region. 🚢

*Any opinions or views expressed in this paper are those of the individual author, unless stated to be those of Future Directions International.*

*The Japan Maritime Self-Defense Force destroyer JDS Kurama leads the guided-missile destroyer USS Fitzgerald, flying their battle flag, and the Indian Navy guided-missile destroyer INS Ranvir*



# World Naval Developments

BY DR NORMAN FRIEDMAN

Perhaps the most surprising development in this year's Euronaval show, in Paris this October, was the public interest in naval ballistic missile defense shown by several important companies, presumably reflecting new official interest. The US Navy has been on anti-ballistic missile patrol since 2004, and NATO has accepted a land installation in Romania. However, many Europeans have argued against embracing this type of defense to avoid offending the Russians, who regard it as an attempt to devalue their own nuclear forces.

This is an increasingly sensitive issue as the Russians find that they cannot afford anything remotely like the scale of military investment achieved by the old Soviet Union, hence cannot modernize or maintain their non-nuclear forces on anything like the old scale. More and more that leaves Russian nuclear forces as the core of Russian national military power. The United States has consistently argued that its evolving national missile defense system is directed against attacks far smaller than anything the Russians might mount. Outside Russia it is usually assumed that the system, both in the United States and in Europe, is directed at least initially against the rising threats of Iranian and North Korean missiles. NATO has formally accepted emplacement of the US Phased Adaptive Approach system, based on the naval Aegis system, in Central Europe.

Presumably the Europeans are now increasingly alarmed at Iranian progress. This is not to suggest that any European imagines that the Iranians will suddenly decide to immolate some major city. Rather, it must be the fear that, once they have the ability to do so, the Iranians will apply pressure whenever they want to force European policy. That might become a critical



*Fire Controlman 2nd Class Matthew E Bellmans a SPY-1B (V) radar console in the Combat Information Center aboard the guided-missile cruiser USS Shiloh. (US Navy photo by Lieutenant (JG) Nelson H. Balido)*

matter if the Iranians decided to touch off a Middle Eastern War. Ballistic missile defense may be the best way to counter the future Iranian nuclear threat.

The West is currently attempting to convince the Iranian regime to abandon its program by imposing economic sanctions. Advocates of sanctions point out that the Iranian economy is visibly crumbling. However, the sanctions seem not to have had much effect on the regime (as opposed to, on the Iranian population). One reason why is that sanctions which damage a country's economy tend to strengthen the hand of the regime at which they are aimed. The regime becomes the only source of increasingly scarce goods. For that matter, the population generally blames the sanction-setters rather than the regime for its problems. That is certainly what happened in Iraq under UN sanctions. The sanctions did prevent Saddam Hussein from maintaining his air defenses, but that mattered only when Iraq was invaded. Advocates of sanctions generally imagine that they are an effective alternative to war, not a means of making an eventual attack more effective.

A second possibility is to strike directly at the Iranian program. It would probably be entirely possible to deliver weapons to Iranian targets, but the Iranians have dispersed their nuclear program and they have also, it seems, hardened it. Evaluations of this option tend to offer to delay the Iranian program by a year or so, but not to destroy it. There is no reason to imagine that the Iranian government would be friendlier a year or so from now, particularly after having been attacked. How much would that delay buy? Complete destruction of the Iranian program would be a different proposition, but that would probably require a nuclear strike, which would kill millions of entirely innocent people—an unthinkable means of dealing with a postulated future threat raised by

*Iranian Navy missile boat*



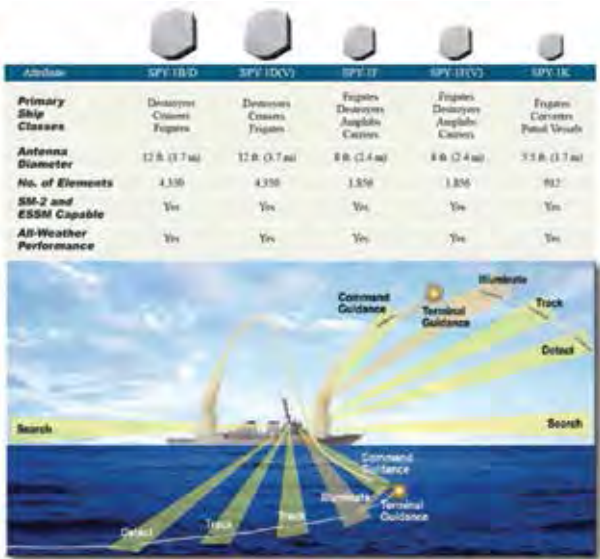
a few men in Qom or in Tehran. An attack on Iran which did not destroy the country would likely cement government support and undermine any opposition.

Then there is deterrence: if the Iranians do launch an attack, surely they must contemplate nuclear retaliation. Unfortunately it is not clear whether the Iranian leadership would be deterred by the threat of nuclear retaliation. Some Iranian statements suggest that they would welcome setting off a nuclear war, which they say would result in the victory of their version of Islam – but that may be no more than poker-playing. That is aside from the question of whether a nuclear threat against the Iranian population would necessarily affect those ruling Iran. This type of question has always bedevilled nuclear strategy. Probably the only effective deterrent would be a direct threat to the Iranian leadership; but what if the leaders actually believe what they say about the desirable outcome of such an attack? We have never been particularly good at understanding truly alien cultures, as witness the failure of US deterrent policy against Japan in 1941.

The new idea is that a program like Iran's can be countered by deploying ballistic missile defense, which may be able to neutralize the Iranian weapons after they are launched. This is actually another form of deterrence, which is always an attempt to affect a potential enemy's calculations. It can certainly be argued that no ballistic missile defense is foolproof. However, any Iranians contemplating an attack would not be at all sure that the defensive system would fail. If it worked, they would be in a rather embarrassing position. They would have fired a dud while waiting to see whether the West fired back with something a lot more massive and more effective (there is no question of substituting missile defense

for deterrence). It certainly helps that the Aegis system to be emplaced in Europe has repeatedly proved itself, so that the Iranians would have to bet that defenses would be effective.

Three companies displayed ballistic missile defense systems at the show. EADS (European Aerospace Defense Systems), a Franco-German company, showed a model of an Exoguard missile which could be fired out of either the US Mk 41 vertical launcher or the French Sylver (as in the current Franco-Italian frigates). It also displayed a model of the kinetic energy kill vehicle which the missile would carry. There were no accompanying brochures, but the missile figured in a formal report to the French Senate last year. Perhaps more significantly, EADS displayed software intended explicitly to teach officials and military decision-makers not yet familiar with ballistic missile defense how it would work. The software simulates engagements, showing how and when decisions have to be made and how many opportunities a given missile system has to intercept an incoming threat. Presumably this relatively simple software is designed so that it can be grown into a missile system command



and control element. That EADS feels there is a need for this kind of software suggests that European governments are increasingly interested in ballistic missile defense.

The second company was Fincantieri, the Italian warship builder. Included in its large array of warship models was a theater ballistic missile defense surface combatant, a frigate equipped with an *Arleigh Burke* class type SPY-1 radar and with six sets of vertical launchers (eight cells each) for the defensive missiles (it also had what looked like Harpoon launchers amidships and the standard Italian 76mm gun forward and a RAM missile

SPY-1 Variants  
(Courtesy Defense Industry Daily)

Japanese WWII carrier power at sea. Two other carriers in the background lead three battleships or battlecruisers, with two or three carriers behind (Simon Loveday, Darwin Military Museum)



## World Naval Developments

launcher aft, as well as a big bow sonar). Full load displacement was given as 6550 metric tons, considerably less than that of a US destroyer (but with only about half as many vertical launcher cells); overall dimensions were 144 x 19.7 m. No maximum speed was given, but the ship was designed to cruise at 15 kts (range 6000 nm).

The Italian model could be interpreted not as an approach to European markets, but rather as a potential contender for the current Saudi Eastern Fleet competition. As displayed, the frigate is equipped with US rather than European weapons and sensors (the Saudis would probably buy US equipment, even if they bought a non-US hull). This interpretation suggests that the Saudis want the system largely for its ability to deal with ballistic missiles. They are certainly vitally interested in defense against Iranian missiles, because they see Iran as their main regional threat. Saudi Arabia seeks to lead the majority (Sunni) branch of Islam. As such it competes against the Iranian-led Shia (Shi'ite) branch. Each conceives the other as heretical; each has an activist wing which advocates destroying the other. For example, the majority of people killed by the Sunni Al Qaeda movement have been Shi'ites, not Westerners.

In the past, the Saudis have been interested in deterrents against Iran, beginning with ballistic missiles bought from China during the Iran-Iraq War of the 1980s. There have been suggestions that the Iranian nuclear program will (or perhaps already has) trigger a Saudi nuclear program, because to be without a bomb would make Saudi Arabia intolerably vulnerable (Israel is generally assumed to have a substantial nuclear arsenal, the great question being why or whether it is not an effective deterrent against Iran). The United States and



probably other powers would almost certainly much prefer the Saudis to invest in missile defense rather than in nuclear weapons of their own, the existence of which would probably induce further governments to acquire their own nuclear weapons. Egypt, which historically has sought the leadership of the Arab world, would be a prime candidate.

Reportedly other contenders for the Saudi order include France and the United States. The competition seems to explain why the US stand included a model of the Lockheed Martin (displacement hull) version of the Littoral Combat Ship adapted as a small Aegis ship with the SPY-1F radar (which is probably much too small to support ballistic missile defense). The French DCNS company showed an evolved version of the current Franco-Italian FREMM frigate featuring a fixed four-face active-array radar

which may have been intended as an alternative to the SPY-1 which equips Aegis ships (there was no explicit connection to ballistic missile defense). The Saudi competition may also explain why the Korean shipbuilder Daewoo exhibited (for the first time at a Euronaval), since it is currently building large Aegis ships. Again, Daewoo made no explicit connection to missile defense, although South Korea is interested in countering existing and future North Korean ballistic missiles.

The third company was Thales, the European electronics giant, whose Dutch naval branch (formerly Signaal)

*Japanese Maritime Self Defence Force ship JS Makinami at RIMPAC. (U.S. Navy photo by Mass Communication Specialist 1st Class Michael R. McCormick)*

*Iranian kilo class submarine*



company showed a version of its Smart-L long-range three-dimensional radar adapted to missile defense specifically for the Royal Netherlands Navy. The passive array of the standard Smart-L is replaced by an active array, and the radar is adapted to use special ballistic missile defense waveforms. It can operate in either staring or rotating mode. In the staring mode, the radar can detect a missile at a range of 1800 to 2000 km (about 1000 nm); in rotating mode, detection range is roughly halved because the radar puts much less energy onto a given cell in space (detection range depends on how much energy pours onto a target). A company representative commented that a rotatable radar offered the political advantage that the Russians would not consider it directed specifically against them (presumably he had a land-based version in mind). The Royal Netherlands Navy is the launch customer.

Smart-L is integral to the Dutch-German naval air defense system using

the Standard Missile (hence relatively easily adapted to ballistic missile defense). It is reportedly closely related to the S-1850 radar of the French-Italian-British PAAMs system, though that radar apparently has a different antenna which might not be as easily adapted to active operation. The existing Smart-L can be adapted (using new software) for shorter-range missile defense, with an effective range of about 600 km. This version was tested off Hawaii in 2006 against ballistic missile targets.

The missile defense exhibits represented a small proportion of the Euronaval show; what seems significant is that they were present at all. They suggest a shift in European governmental attitudes, and probably also an increasing suspicion that nothing short of an unacceptable attack can prevent the Iranians from completing nuclear weapons and mating them with ballistic missiles. 🚢

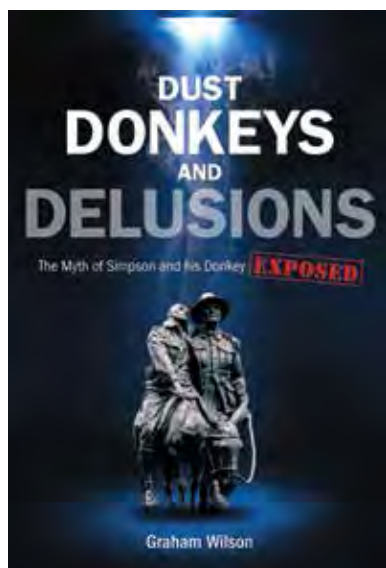


*Norman Friedman's latest book is **The Naval Institute Guide to World Naval Weapon Systems***



*Japanese Maritime Self Defence Force destroyer JDS Haruna-photo by Michael Nitz*

# Book Reviews



## DUST DONKEYS AND DELUSIONS

By Graham Wilson

Published by Big Sky Publishing for the Army History Unit.

Softcover, 402 pages

Reviewed by Tom Lewis

It's questionable as to whether the Australian War Memorial's statue of Simpson and his donkey will have to be melted down after the revelations of *Dust Donkeys and Delusions*, but as the immortal Duke is reported to have said, it will be a near run thing. For author Graham Wilson, in this comprehensive survey of the story, has demolished almost everything that Australia understands to be fact in the pervasive myth of World War I's Private Simpson and his donkey.

I say "myth" deliberately here, because Wilson has proved his case. He takes on the simple aspects of the story: Simpson was said to be a tall, Australian, larrikin soldier with an applauded sense of humour. Simpson, in fact, was from Britain, of a height of about five foot eight inches – about 174 centimetres; possessed an offence-free personal records, and was not, as per legend, given to drinking his mates' beer, leading a raid on officers' food

supplies on anchored ships, and he was not universally known and marvelled at for his everyday activities. These are just repeated aspects of the tale – the story that many would rather believe.

Not that Wilson stops with the simple. For example, he analyses the 300 or so journeys Simpson is reputed to have taken with his donkey, between the time of his landing and the day he was killed. The calculations eventually sound like an algebra problem: "if one soldier with a donkey takes 105 minutes to bring one casualty down to the beach, how long will it take..." and so on. Wilson shows convincingly that Simpson could not mathematically have done what was ascribed to him.

Also analysed completely and competently are the other aspects of the story. Was Simpson "missed out for a Victoria Cross?" No, he wasn't – in fact he wasn't even recommended. Was this due to some intransigence by those above him? No, although the author spends I think, too much time analysing the characters of two of these men: Colonel Howse, and Lieutenant Colonel Sutton.

Did Simpson make "lightning dashes" into dangerous ground to rescue downed men? Was he at greater risk than others? Was he revered by the Indian soldiers, and did he exert mystic command over animals? Did all on the Anzac peninsula mourn his death, with "a hush" falling over the battlefield? Was he technically "a deserter" from his real task? All this and more – to be all of these things Simpson would have been a busy man who didn't need sleep – are shown to be just part of the myth, much of it growing after the campaign.

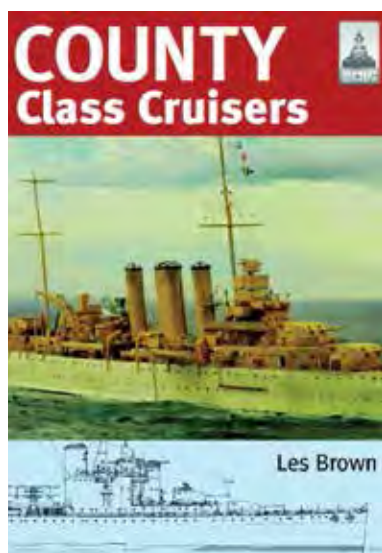
In the end author Wilson shows Simpson to have been just an ordinary soldier, doing an ordinary job – one done by others too. It was not Simpson's fault to have these stories made up about him, for he was dead by then. In calculated yet very

readable prose author Wilson takes apart the stories, but he is also to be congratulated for a side-effect: in his analysis he also tells the tale of Gallipoli.

So should the statue be melted down, or all of them reassessed, for in fact there are other statues, and memorabilia. Wilson does not say that Simpson should be dismissed, or forgotten. Rather, he is asking for people to not affix qualities that are in the end rather insulting to the ordinary bloke concerned, Private John Kirkpatrick Simpson.

The book is well illustrated with black and white photographs of the time. An exhaustive collection of notes, appendices, a bibliography, and an index will assist those who wish to follow up any of this research for themselves. *Dust Donkeys and Delusions* is well written; beautifully researched, and thoroughly recommended. 🐘

*Dr Tom Lewis recently exposed many myths of the battlefield in Lethality in Combat, a study of the realities of combat through six wars.*



## COUNTY CLASS CRUISERS

By Les Brown

Seaforth Publishing

ISBN 978-1-84832-127-4

64 pages including line drawings, coloured artwork and numerous black and white photographs

£14.99 recommended

Reviewed by Commander David Hobbs MBE RN (Ret'd)

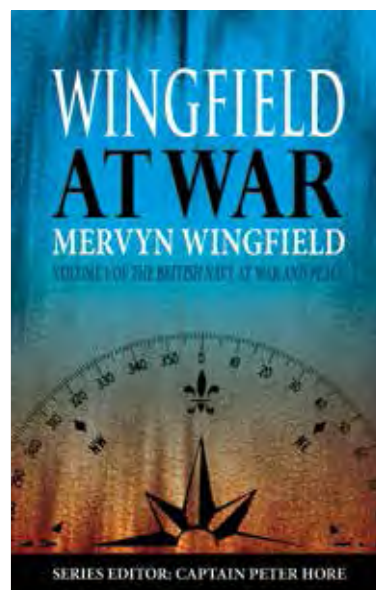
This attractive monograph is the latest in a series that cover British, American, German and Japanese warships of World War II. Whilst intended primarily for ship modellers, they contain a wealth of detail about individual ships that will not be found in other publications, including coloured artwork that shows the camouflage schemes that distinguished several ships during the war. That for *HMAS Canberra* shows her as she was in May 1942 after her last wartime refit.

The first section gives details of the class design and construction and the second describes the careers, modifications and refits of individual ships, those for HMA Ships *Australia*, *Canberra* and *Shropshire* running to several pages. Photographs are well-chosen to illustrate different ships

and details of their equipment; they are particularly helpful for learning recognition features that illustrate the slight differences that existed between them. I had not seen a photograph of a Supermarine Seagull III on *Australia* before she was fitted with a catapult and found that image particularly interesting. The line drawings by AD Baker III and the colour artwork by Eric Leon are excellent.

For modellers, the book reviews every product from which models of a County class cruiser can be created, some of which are now collectors' items long out of production and only available at specialist sales but most are currently available. They range in scale from 1:3000 for war-gamers to 1:128 for a floating, radio-controlled model. Accessories that allow basic kits to be improved are also described. The central section includes colour photographs of completed models, including a 1:700 model of *HMAS Australia*. Some of these are scratch-built and the spectacular close-up shots of them allow levels of detail to be seen that could not easily be picked out in black and white photographs of the real ship. If anyone reading this review has ever thought of building a model County class cruiser, this book will provide the stimulus to get started!

However, this modestly-priced paperback gives a lot of general detail about the County class together with individual ship histories and will be of interest outside the ship-modelling community. I recommend *County Class Cruisers* to anyone who wants to know more about these iconic ships. 🚢



## WINGFIELD AT WAR

By CAPT Mervyn Wingfield DSO DSC RN

Edited by Captain Peter Hore RN

Whittles Publishing, Caithness, 2012

[www.whittlespublishing.com](http://www.whittlespublishing.com)

hardback; 168 pages with 30 b/w

photos, GBP £16.99/ \$US 21.95

recommended

ISBN 978-1-84995-064-0

Reviewed by Commander David Hobbs MBE RN (Rtd)

This is the first in a series of books to be edited by Peter Hore and published by Whittles in the UK which have as their basis the previously unpublished memoirs of people who were connected with the sea. This autobiographical work by Mervyn Wingfield was written for his family and made available to the editor by his son who also helped with the selection of photographs. Peter Hore has taken the original document and set it into context by carefully adding footnotes and endnotes which amplify references to people, places and ships with which the modern reader might not be familiar. He also provides an unobtrusive, historical framework within which the story can be located.

Mervyn Wingfield was a submariner

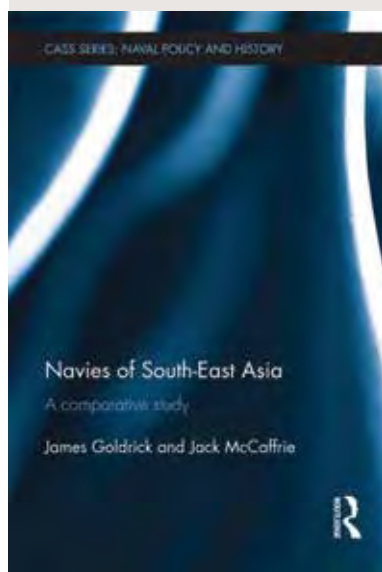
# Book Reviews

who commanded three boats, *Umpire*, *Sturgeon* and *Taurus* during World War II; he did not serve with the RAN but his stories of the RN from 1925 onwards describe an organisation that will be familiar to generations of Australians who were trained by or who served with the RN. He spent time on the China Station during the 1930s in the submarine *Odin*, sister ship of the *Otway* and *Oxley* operated by the RAN between 1927 and 1931, and writes of a way of life that is now almost forgotten with quiet humour that brings his adventures to life in the reader's imagination. His wartime exploits included surviving a collision in the North Sea; spending a winter operating with the Russians in the Arctic; penetrating a Norwegian Fjord by passing through a minefield; surfacing off St Nazaire in full view of German guns to act as a navigation marker for a raiding force; fighting cavalry in the Northern Aegean and, not least, commanding the first British boat to sink a Japanese submarine.

Many of his contemporaries were 'burned out' by their wartime experiences, especially those who held submarine command for as long as he did, but Mervyn Wingfield went on to enjoy a successful post-war career, reaching the rank of captain. He served in a number of appointments including command of an air station, staff appointments and time as a naval attaché. I particularly enjoyed the account of his time in command of the reserve fleet in the Gare Loch in Scotland during the mid 1950s in which he states, modestly, that he was made an honorary member of the Royal Northern Yacht Club principally because he was prepared to move a battleship or a cruiser to different moorings in order to clear the yacht racing course.

*Wingfield at War* is a delightful book that gives insight into historical events

through the eyes of the author which are carefully edited to ensure their accuracy. I thoroughly recommend it. 🦋



## NAVIES OF SOUTH-EAST ASIA: A COMPARATIVE STUDY

James Goldrick and Jack McCaffrie

*Cass Series: Naval Policy & History, No. 50*  
Routledge, London & New York, 2013

Reviewed by Dr Gregory P. Gilbert

Every year a number of publications, such as *The Military Balance* and *Jane's Fighting Ships*, report recent intelligence on the world's navies. Much of this material is of considerable value as it generates thoughts on how such physical changes influence our own strategic outlook but often we are left wanting more. There is a yawning gap in our understanding of why each of the world's navies are changing, and of how other nations see themselves applying sea power. We need to enter the cultural dimension!

*Navies of South-East Asia: A Comparative Study* provides a comprehensive survey of the development and operations of the navies of South-East Asia since the end of World War II. The authors use history to describe how the selected

navies have changed over time, and, in turn, how the past continues to influence the way these navies see themselves today. Whereas most studies concentrate on capability, this study also examines the ideas behind naval contributions to national power. As maritime strategy in the 21st century increasingly moves towards naval cooperation instead of confrontation – in Geoffrey Till's words, towards post-modern naval strategy instead of modern naval strategy – the importance of the cultural dimension has increased.<sup>1</sup> This book addresses the intent, as well as the capability, of each South-East Asian navy.

The navies of South-East Asia have been neglected in contrast to the major Asia-Pacific navies, particularly China and Japan. In the past, perhaps not surprisingly, considerable effort has been applied to strategic and academic studies of the rise of China and the subsequent impact upon the United States and its major allies. Unlike the great naval races of the early 20th century, however, when the global naval powers predominated and smaller navies were largely irrelevant. All navies operating in the Asia-Pacific today must take the small to medium navies of South-East Asia into account, as the various navies are likely to play an increasingly significant role.

Stand-alone chapters detail the development of ten of the region's navies: the Royal Brunei Navy, Burma's Navy, the Royal Cambodian Navy, the Indonesian Navy, the Royal Malaysian Navy, the Republic of the Philippines Navy, the Republic of Singapore Navy, the Royal Thai Navy, the (now defunct) South Vietnam Navy, and the People's Army of Vietnam Navy. The development of each navy is placed within its national context with considerations of

<sup>1</sup> Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, 2nd edn, Routledge, London and New York, 2009, pp. 1-19.

economic, technological, and national development, as well as the origin of the respective navies. For example, the British Royal Navy exerts a 'hidden' influence on the strategic outlook and operational effectiveness of the Royal Malaysian Navy. In turn, this has benefited and hindered the Royal Malaysian Navy's development. The 'British model' remains important for the navies of Malaysia and Singapore, even today, just as it does for the Australia and New Zealand navies. The US Navy's methods differed significantly from the British, and affected the development of the South Vietnamese, Philippine and Thai navies in an altogether different way. The Indonesian Navy and the People's Army of Vietnam Navy experiences were, at one time or another, influenced by a Russian approach, and again they generated both favourable and unfavourable results. These ten chapters are unique and valuable, potted histories of each South-East Asian navy over the last 70 years or so.

Both authors, James Goldrick and Jack McCaffrie, have had long and illustrious careers with the Royal Australian Navy (RAN), and it shows. They both have extensive operational experience and are known for their intellectual contribution to the RAN; however it is their in-depth knowledge and experience in navy-to-navy engagement that comes to the surface in *Navies of South-East Asia*. In a thousand subtle ways, the authors have navigated through dense minefields, and avoided cultural sensitivities, without holding back when important stories needed to be told. They do not kowtow to national or political pressures and they are not unintentionally biased in the way that some Western authors (including some Australians) often are.

The book is a direct and honest guide for everyone who is interested in

South-East Asia and the Asia-Pacific century. Unlike many other books on navies, this one puts the reader in the same cultural mindset as those who serve within the navies of our region. It is a tool for peace and stability, for cooperation and understanding, as well as for common values and customs.

This book is one of the building blocks of the global maritime partnership which is needed to secure the maritime commons. *Navies of South-East Asia* should be mandatory reading for all permanent naval members who need to engage with their counterparts in regional navies. It should be kept within reach of anyone involved with maritime strategy, capability, intelligence, or international engagement. Every ship and every base needs to have a copy at hand. 🚢



## **IN GOOD HANDS: THE LIFE OF DR SAM STENING, POW**

*By Dr Ian Pfennigwerth*

ISBN: 9780987227836

BELLONA 2012

[www.publish-me.com.au](http://www.publish-me.com.au)

*Reviewed by*

**LCDR Desmond Woods, RAN**

Naval History, like all other history, depends on good scholarship and

research. Skilled biography based on eyewitness interviews can be a most effective pathway into the much larger story within which a life was lived. So it is with this excellent new biography of Lieutenant Sam Stening, RANVR, by noted Australian naval historian Ian Pfennigwerth.

Sam Stening was an inspirational RAN medical officer serving the needs of his fellow POWs working as slave labourers in Japan for four long and brutal years. Post war he was a pioneer Australian neonatologist. This was a rare, if not unique medical career. The lives that Sam saved during his years of captivity were those of men suffering all the horrors and deprivations of life as prisoners of Japan. For the rest of his medical career he kept alive the most tiny and fragile newborn premature babies. The common denominators between these two parts of his life were his skill, ingenuity, compassion, and his determination never to give up while life continued to flicker. He claimed to be a merely a medical officer, and to be, 'not very brave.' In reality he modelled from captivity, for his generation, naval leadership in the very highest traditions of both the medical branch and the wartime RAN and was rightly decorated for his courageous leadership of men.

Sam Stening was a young Sydney doctor who on the outbreak of war volunteered for the RANVR. He was posted to *HMAS Canberra* to find his feet as a new naval doctor. By June 1941 he was in *HMAS Waterhen* on the "spud run" to Tobruk. On this most hazardous of delivery runs *Waterhen* was badly damaged by bombing and later sank. Fortunately no lives were lost in this first RAN ship lost to the enemy in World War II. That escape without loss of life is where the Navy and Sam Stening's luck ran out.

After leave and marriage to Olivia in August 1941 he was posted to join

# Book Reviews

Captain Hec Waller's *HMAS Perth* which he found to be a highly efficient and happy ship. He was the junior medical officer. He was not to see his new wife for four years.

The first account intended for the public of the life and death of *HMAS Perth* in the Battle of Sunda Strait was written in 1953 by Ronald McKie in his book *Proud Echo*. McKie describes Sam Stening's first weeks as a POW doctor treating his shipmate survivors:

*"...Many of the more severely wounded did not survive the ordeal of the hours in the water, which was covered densely with fuel oil. Surgeon Lieutenant S.E.L. Stening, RAN who was wounded, was amongst those saved: they were picked up by a Japanese destroyer and transferred to the Somedong Maru, on which they were imprisoned for a week.*

*After some days a Japanese Army surgeon came with two assistants and good equipment, and with the help of Stening and a petty officer dressed the wounds, though insufficient dressings were left for after care. Some 300 men were then taken to Serang in trucks, where they were kept in the gaol and cinema. Only after ten days were the medical officers released from the gaol cells. Stening had only a dressings forceps and scissors and very few dressings with which to work and quite inadequate drugs to treat the dysentery and malaria which soon beset the 600 men in the prison compounds. After a month, during which two deaths occurred, Stening and twelve other officers were taken to Batavia and shipped to Japan..."*

If Ian Pfennigwerth had not undertaken his research interviews for this book McKie's account is where the public record of this remarkable but little known RAN officer's war service

may have rested for posterity. In *Good Hands* has corrected that omission in public knowledge and done justice to a great Australian. This is a story of what happened to Sam after *Perth* was lost.

He faced a regime of callous, senseless beatings, indifference, corruption and outright theft on the part of the third rate Japanese troops and Koreans who made up the POW guards. Sam negotiated for his men with a succession of their equally insensate Japanese officers who initially treated reasonable requests by Sam for improvements in sanitation and for adequate food and medicines with contempt, and more violence, while profiting personally from the misery they inflicted. Sam took the beatings and gradually wore down opposition by his dignity, logic and quiet courage.

POWs were forced to work in an inefficient unskilled POW slave labour regime, demanding human muscle power in mines and docks, on a very low calorie diet. It resulted in semi-starvation, lowered resistance, injury and diseases. These included beri beri, malaria, dysentery and diphtheria and the ever present weakness and muscular wastage caused by emaciation. Clear evidence that men were in a state of physical extremis was no impediment to their being made to work 14 hour days in biting cold or suffocating heat using the last reserves of health and strength. The lack of rest and food meant that strength was never able to be replenished before the gruelling pointless regime resumed. Work and torture were indistinguishable and equally lethal.

Sam Stening was moved through eight POW camps and was frequently the only western trained doctor available to treat hundreds of men who, like himself, had arrived in Japan in infamous "hell ships". These were cargo carriers where the conditions below hatches in grossly overcrowded

holds lacked any sanitation and previously healthy men died in as little as ten days of heat exhaustion, dysentery dehydration and despair. The survivors were barely fit to stand far less work when they arrived in Japan. The stupidity of this inhumane regime seems never to have been a sufficient cause for moderating it in the interests of having men fit to work at the other end of the passage.

Sam for much of his captivity was the only officer in 'other ranks' camps having to exercise command over traumatised men of many nationalities. Rarely was he among Australians. This may partly explain why his reputation in his homeland has never been fully acknowledged and his name is hardly known. Most of the men who, despite his skilled ministrations died, most of the lives he saved or made more bearable were American, Canadian or British – not Australian.

Sam had to tread the line between not giving way to the incessant and inhuman demands of the Japanese for slave labour from sick men while still retaining the ability to be influential with the camp commandants. Remonstrance without redress was pointless. Sam had to decide who got the limited supply of Red Cross food and medication which got through to him after being pilfered by the hungry guards. The allocation of food was a life and death decision which he had to make daily for years. There was never enough lifesaving medicine to go round and Sam had to use his ingenuity to obtain more from local Japanese – at great risk to himself.

In addition to the external enemy he had to deal with the hostility felt by men who believed that they had been betrayed by the actions of the Dutch East Indies Government. Ian Pfennigwerth writes of this: "Many if not most of the American and British survivors of the Battles in the Java

Sea brought with them not only the smouldering humiliation of their defeat and the burden of the memory of lost comrades, but the conviction that it was 'all the fault of the Dutch'. Sam was called on to mediate and try to resolve disputes which threatened to tear the fragile multi-national POW community apart.

He also had to deal firmly with a few uncontrolled NCOs from many nationalities who, in the absence of their officers, had plans for running the camps as they saw fit without reference to legitimate military authority. In the absence of the ability to enforce military justice or disciplinary sanctions Sam used his intelligence and moral force to largely keep a lid on this self interest and undue influence which were always incipient. He was dealing with starving, ill clothed conscripts, who knew that not everyone was going to survive the hell they were living through. It was his constant moderating influence and care that prevented a "Lord of the Flies" scenario being played out where the strong preyed on the weak and survival of the fittest became the only law.

For an inexperienced RANVR junior medical officer to be dealing with such complex matters, providing leadership and ethical example to hungry men while retaining his own morale and sustaining others was heroic. Australians rightly honour the surgical skill, determination and courage of Lieutenant Colonel Edward 'Weary' Dunlop as he protected and defended his exhausted men being brutalised on the Burma railway. However 'Weary' was an experienced senior officer, with other more junior officers with him to confide in and to share the burdens of command. Sam was experiencing the same mindless, robotic violence directed at himself and his men, as Weary Dunlop and other senior officers of POW camps, but

he was effectively alone in command for years. It is hard to imagine a more testing set of circumstances for any junior officer to be placed in. Sam's last service to the prisoners was to prevent them gorging themselves on food when the camps were liberated before they were ready for a normal diet. Those who ignored his advice died.

In 1945 Sam returned to Sydney and set about re-making his medical career and finally starting married life. When a true understanding of the magnitude of his achievement in captivity became known to the Australian Government Sam was awarded the Distinguished Service Cross. His medical colleagues knew little about his war service and Sam did not enlighten them.

Sam was one of the pioneers engaged in creating the role of neonatal paediatrician in Sydney. For many years this was another rather solitary battle as the majority of the medical establishment were unconvinced of the need for children's specialists. Post war the general attitude of senior members of his profession was that children and babies were, medically speaking, just small adults and could be successfully treated by GPs. Sam led his junior colleagues in winning recognition that this was not so and that the care of the new born and sick young children needed specialist training and new technology if the best results for infants and 'sick kids' were to be obtained. There must be thousands of Australians now in mid life and older who owe their existence to Sam and his team's dedication to keeping them alive and oxygenated when they arrived in the world prematurely and jaundiced at the Sydney Women's Hospital in Crown Street. His particular expertise was in the area of paediatric allergies. Sam died in 1983. One of his colleagues wrote: "People who worked with him and his team had a great respect for his clinical acumen. He was an excellent

teacher and physician."

One of his former POW charges wrote:

Sam often tried to prevent the bestial parades and beatings and was beaten himself. His request for medicine paid off and rice dust was allowed into the camp to add to the rice food. Men were suffering from malnutrition, colds, bronchitis, dysentery, eye conditions, burns, abrasions, bruises, broken bones, frostbite. Men could not walk, many were unconscious. Imagine the Herclean effort by "the Doc"; no letup for him.

It is appropriate that this book has appeared in the 70th anniversary year of the loss of *HMAS Perth*. Given all that we know of her gallant Captain, and his dedication to his men, one must conclude that had Hec Waller lived to know of the service that Perth's newly joined junior medical officer was to perform while a prisoner of Japan he would have been full of admiration and gratitude for the care and skill that Sam showed for Perth's men and later so many others who had fallen into captivity. Sam waged war on the cruelty, neglect and barbarism of the camps that the Japanese Empire administered. In the midst of bestiality and despair he kept hope alive for men who needed to be in his good hands.

This thoroughly researched and well illustrated new biography is highly recommended. It should be read by Junior Officers studying leadership. It will be of interest to all readers who care about the history of the Navy's medical branch and the capacity for moral leadership of an RAN junior officer when required by wartime circumstances to exceed all expectations of his rank and experience and to lead by serving his men. 🚢



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# Visions from the Vault



Ordered in the early 1960s to provide limited area air defence for the fleet, the three American designed Charles F Adams class guided missile destroyers (DDG), HMA Ships *Perth* (II), *Hobart* (II) and *Brisbane* (II), introduced wholesale changes into the RAN. Farther and faster than any previous developments, the need to absorb new technologies, an unfamiliar naval lexicon and a modern computer-based logistic support system, pushed the navy away from its British roots and down the path towards becoming a uniquely Australian service. Taken

in March 1965 at Defoe Shipbuilding in Bay City, Michigan, this photograph of *Perth* nearing completion shows her Supply Officer, Commander Ian Crawford (left) and Executive Officer, Commander Ian Richards conferring on the upper deck. Shortly thereafter *Perth* began sea trials in Lake Huron before formal commissioning at Boston on 22 May 1965.

The DDGs provide an excellent example of the long-term flexibility of a well-designed warship. All three were employed during the Vietnam War providing maritime interdiction

and naval gunfire support. During the 1970s and 1980s the ships received regular weapon, sensor and C2 upgrades and remained extremely effective ships, *Brisbane* serving in the 1991 Gulf war providing air defence and fighter control for US Navy aircraft carriers. The last DDG decommissioned in 2001, her withdrawal necessary due to high personnel requirements and the increasing cost of mechanical upkeep rather than the obsolescence of her warfighting systems. 🚢

## ANI ON-LINE: A GUIDE TO THE NEW WEBSITE.

*Our new website is now on-line! In addition to the features available on the previous site, the new site also features a library of past journals, a discussion forum, a news section and member list. This short guide is designed to help you take full advantage of the new features.*

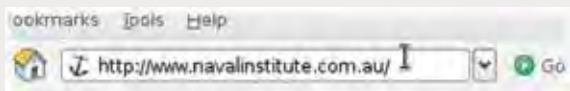


Figure 1

### OBTAINING AN ACCOUNT

In order to access the new features of the site you must have a user account for the website. If you have a current subscription to the ANI, navigate to the website [www.navalinstitute.com.au](http://www.navalinstitute.com.au) using your web browser (figure 1), click the "Members Login" menu item (figure 2), then click the link to download an application form. Fill in the form, then fax or post it to the ANI Business Manager. Once your account has been created, you will receive an email that outlines your member ID and password.



Figure 2



Figure 3

### LOGGING IN TO YOUR ACCOUNT

Once you have your account details, you are ready to login and access the new features of the site. In order to login, navigate to the website (figure 1) and click the "Members Login" item (figure 2). Enter your member ID and password as they were provided to you, then click the "Login" button. The case of the member ID and password are important: i.e. "CaSe" and "case" are considered entirely different words by the authentication system. Each letter of the password will appear as a single "\*" to prevent others from seeing your password as you type. If you have entered your details correctly, you will be presented with the news page. The grey status bar at the top notifies you of the account you are using (figure 4). You are now able to access all of the new features of the site.

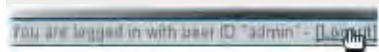


Figure 4

### LOGGING OUT OF YOUR ACCOUNT

In order to protect your identity and to prevent malicious use of your account by others, you must log out of the site when you are finished browsing. This is especially important on public computers. In order to log out, click the "Logout" link in the grey status bar (figure 4).

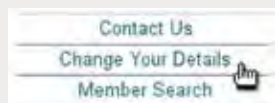


Figure 5

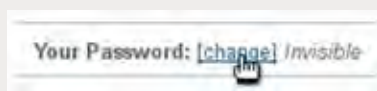


Figure 6

### CHANGING YOUR DETAILS

When your account is created, only your member ID and password are stored in the system for privacy reasons. However, you may provide other details that are visible to other ANI members. In order to change your details, login and click the "Change Your Details" menu item (figure 5). Then select the "change" link (figure 6) next to either your personal details or password. Change the text appropriately and click the "save" button (figure 7).

The personal information that you provide will be visible to other members of the ANI but will be hidden from members of the general public. You may provide as much or as little detail as you wish but none of the fields are compulsory. However, you may not change your member ID as it is the link between the on-line database and our off-line records.

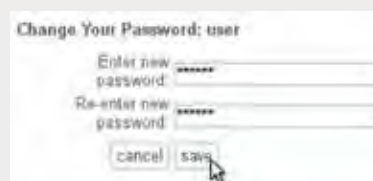


Figure 7

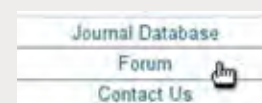


Figure 8

### PARTICIPATING IN THE FORUM

In order to post topics and replies in the discussion forum, first login and click the "Forum" menu item (figure 8). Then select a forum that you would like to view by clicking its "View Topics" button (figure 9). Select a topic that you would like to read by clicking its "View this topic" link (figure 10). If you are not interested in any particular topic, you may add your own by clicking the "Add New Topic" button (figure 10). Similarly, once you are viewing a topic, you may post a reply by clicking "Add New Post". Fill in the heading and body of your reply and click the "Submit" button to add your reply to the topic. If you change your mind while writing your reply, you may click the "Cancel" button and your reply will not be added to the topic.



Figure 9

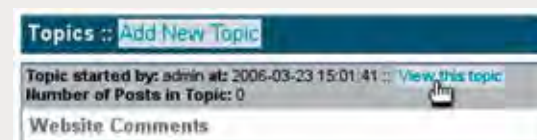


Figure 10

### FURTHER QUESTIONS

If you have specific questions regarding website features or even a feature request, post a topic in the "Website Questions" forum and a site administrator will reply. Otherwise, happy browsing!

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Use single quotation marks for quotations. Do not use hyphens for any rank except Sub-Lieutenant.

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So, web site name. Article title. Full date of accessing the site. Full URL.

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