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SYDNEY
170 Edwin St
Surry Hills
NSW 2017
Phone 31 2056

ADELAIDE
17 Cochrane St
Adelaide 3002
Phone 51 6225

PERTH
5th Floor, Empire House
6 William Street
Perth 6000
Phone 33 4277

MELBOURNE
38 Bourke Street
Princes Bridge
Melbourne 3000
Phone 31 2051

BRISBANE
122 Murray St
Brisbane 4000
Phone 51 2051

HOBART
120 Ann Street
Hobart 7000
Phone 34 4066

Editorial
ROSS GILLETT
PO BOX 653
DEE WHY, NSW 2099
PHONE: (02) 982 1257

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NAVY

Front Cover
HMAS HOBART — September, 1982
(Photograph — Command Photographic Section)

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January, 1983
THE NAVY
Page One
6000 tonnes of amphibious heavy lift ship capable of operating in areas where there are no port facilities.

TOBRUK can beach and unload through bow doors. "Swim" amphibious vehicles from the stern doors bring landing craft alongside and accommodate between 350 & 500 troops.

Carrington Slipways Pty. Ltd. have been responsible for the construction of a number of such ships. They are justly proud in an Australian Shipyard in 15 years.

The HMAS TOBRUK will be capable of carrying a squadron of the Army’s Leopard Tanks, large numbers of wheeled vehicles and accommodate between 350 & 500 troops. Carrington Slipways Pty. Ltd. have been responsible for the construction of a number of such ships. They are justly proud in an Australian Shipyard in 15 years.

The most obvious, but by no means the only maritime power, is that due to the long time needed to build a Fleet, it is the capability of other navies that must be noted when assessing possible threats, and not necessarily the probable intentions of the governments concerned, particularly if they are dictatorships.

With the change in the balance of strategic maritime power, and noting that, despite our current economic problems, we are not a handful, mostly those who enjoy holiday cruises, or yachtsmen, are cut off entirely from the world around them and are usually oblivious even of whether they are over land or sea. Only a handful of our citizens have ever experienced such a ship needs no elucidation.

Our economy and our hinterland is uninviting, and noting that, despite our current economic problems, we are not immune to attack for political reasons — and yet. Our global position requires an ever more powerful maritime force: for strike warfare and air defence some 8000 miles from home — open to attack by a powerful, modern, efficient, and determined shore-based air force, whose bases were themselves immune to attack for political reasons — and yet.

We should note for instance that the Falklands War erupted at very short notice, between two nations both of whom could be said to belong to the Western camp. This backdrop strongly supports the view that, due to the long time needed to build a Fleet, it is the capability of other navies that must be noted when assessing possible threats, and not necessarily the probable intentions of the governments concerned, particularly if they are dictatorships.

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A programme of performance enhancement currently being carried out under British Ministry of Defence contract will ensure that the system continues to meet developing defence requirements.

(2) THE R.A.N. TODAY AND TOMORROW

by RADM I. W. KNOX, RAN

I applaud the initiative of the Navy League of Australia and the Naval Association of Australia to hold this symposium in Navy Week, and I am delighted to be here to talk to you on the Navy Force structure and requirements.

However, before addressing the Navy as it is today and, hopefully, what it might be tomorrow, I believe it is important to put it in proper context. Therefore, I intend to discuss National Strategy, Australia’s National Security interests, our need for a Navy and the nature of war at sea before looking at our current force.

In the development of Australia and the preservation of our way of life, defence must be considered in the broader concept of a national strategy. National strategy can be defined as:

‘The art and science of employing national power under all circumstances during peace and war to obtain national objectives’.

National strategy thus embraces a wide range of integrated factors which require policy direction by the Government. I refer to policies such as:

- Foreign Relations
- Trade
- Energy

January, 1983

THE NAVY

Photograph: R.A.N.

THE CAPABILITIES OF THE AUSTRALIAN DEFENCE FORCE ARE AN INTEGRAL PART OF ANY NATIONAL SECURITY POLICY — BUT THEY ARE NOT THE WHOLE — NOR DOES THE PROTECTION OF THE NATION FROM ALL TYPES OF EXTERNAL AGGRESSION INVOLVE OUR DEFENCE FORCE IN CONFLICT SITUATIONS ONLY. THE DEFENCE FORCE ALSO HAS A VITAL ROLE IN THE PROTECTION OF THE NATION FROM OTHER INIMICAL OR ADVERSE INFLUENCES.

WHilst an Australian National Security Policy has not been stated as such, Australia’s principal National Security interests can be identified as:

(a) Preservation of Sovereignty over our continent, island territories and territorial seas, and of our sovereign rights in our resource areas.
(b) Avoidance of global war.
(c) Security of our overseas and coastal lines of communication.
(d) Maintenance of good relations and reduction of tensions with other countries, particularly those in our region.

Despite being an island nation, which was discovered, founded and protected by sailors, Australia does not have a maritime tradition. Initially, we were part of the UK Imperial Defence system and provided some of the manpower for the defence of the Empire. The ultimate security of Australia was guaranteed by the Royal Navy (after 1941 that role was shouldered by the US Navy).

With the radical changes to our security relationship in the late 60s and early 70s — the British withdrawal from east of Suez, and the Nixon (Guam) doctrine — the forward defence policy was abandoned in favour of increased self reliance and concern for the defence of Australia and its interests.

If our first line of defence can no longer be on the mainland of Asia, or provided by the Navies of great and powerful friends, one does not have to be particularly perceptive when looking at this map to see that our first line of defence must be on, under and over the vast oceans that surround our continent. Additionally, we must be prepared to deter the development of influences within our region which might be detrimental to our interests. Finally, we must also remember that about 30% of our gross domestic product is carried to or from Australia across the oceans in ships.
Therefore I believe that we require an effective maritime force with regional superiority for deterrence and to have the necessary combat capability should that deterrence fail.

A nation's seapower flows from its ability to use the sea. The way to exploit the maritime environment to its advantage, for political, economic, scientific or military purposes, and to present us to our disadvantage, both in peace and war, is of interest to note how clearly this concept is understood by the Soviet Union, whose seapower we have seen grow from virtually nothing since World War II. Soviet Admiral of-the-Fleet Gorshkov writes in his book 'The Seapower of the State that:

The importance of the ocean cannot be overemphasised:

This essence of the seapower of the State lies in the degree of ability to most effectively utilise the world ocean in the interests of the State as a whole.

Australia, of course, is not a super power and our seapower activities are correspondingly lower but I believe the same principles apply. However, our military tradition had been oriented towards land forces and our merchant fleet has been, and is, very small by world standards.

In developing the military elements of Australian seapower, factors such as geography, population size and distribution, infrastructure, industrial capacity and resources distribution combine to create enduring features in our strategic environment. These enduring features, rather than current perceived or unperceived threat, dictate that emphasis be given to maritime capabilities.

In the event of a threat of major conventional attack, the aim of Australian Maritime operations would be to disrupt the aggressor's forces in the Australian Maritime approaches in the vicinity of his bases or staging areas. Naval Forces would contribute to this aim by offensive operations against the enemy assault forces, or indirectly by operations elsewhere to weaken such forces.

In many circumstances, from medium to high level, protection of shipping would be a major task. Few people understand the importance of our seaborne trade. Virtually all our overseas trade and much of our interstate trade is carried in ships. Over two hundred million tonnes of cargo are carried in and out of Australia by sea each year. On an average, there are about 175 merchant ships in our ports and about 175 in transit to or from Australia in our area of interest. Without the free and uninterrupted passage of this shipping our trade dependent economy would quickly be disrupted. In any defence contingency, the Australian Defence Force will be heavily dependent upon imported goods, both for essential defence requirements and for use in Australian defence manufacturing industry. Significant interference with our overseas trade could seriously affect the Defence Force's ability to continue operating. We therefore need a capability to protect our vital shipping.

It is important that we are able to influence events in our region. In particular, we must be able to counter the development of situations which would be detrimental to Australia's development. Naturally, this would call for increased pressure on our diplomatic efforts, but as Thomas Hobbes observed 'Covenants without swords but words'. What role then can our Defence Force play?

Seapower has long been acknowledged as having a major role as an instrument of diplomacy — indeed military power at sea can be used in various ways to advance political objectives in time of peace or, in the absence of conflict, by projecting power at sea to neutralising similar activities by other naval powers, or merely by advertising one's presence by "showing the flag".

Naval presence exists as a purely peacetime concept, having as its only objective the avoidance of war through its impact on the political decisions of international actors. See then the role of the Royal Australian Navy. We are a defence force which is not a super power and our present capability level is inadequate. The acquisition of replacements for ageing units is therefore a matter of priority but that is not to say our planning is based on a replacement syndrome. Also having said that, I would stress that the effectiveness and operation readiness of our fleet is good. The training of our officers and men is of a high standard, and the RAN has a well-earned reputation with our Allies of demonstrating a high degree of professional skill.

THE NATURE OF WAR AT SEA

I think it is worth spending a few minutes clearing up one or two misconceptions about the nature of war at sea, and to answer some of the questions and criticisms raised during recent public debate concerning the aircraft carrier.

Firstly, The day of the surface ship is not over. Surface ships have the advantage of endurance, relatively high sustained speed and the ability to carry a variety of sensors and weapons. They are effective in all three dimensions, provided the necessary complementary offensive and defensive capabilities are fitted.

Recent publicity has made much of the vulnerability of surface ships to air-launched missiles, and iron bombs and uncommitted pilots, on the basis of British losses in the Falklands. The old truth should not be obscured that to sail...
a fleet — any fleet — into the range of land-based air power and there to attempt an amphibious landing is to run a very high risk. Local air superiority is required to ensure the necessary defence in depth. Despite their excellent performance, some 20 Sea Harriers (which had roles allocated to air defence) could not ensure adequate local air superiority in the face of some 200 land-based aircraft.

Second, it has been suggested that Australia should purchase a fleet of missile firing patrol boats and more submarines instead of a fleet of larger more expensive ships. Local air superiority can only be assured by firing patrol boats, but also on the distant front they have a number of shortcomings which make them unsuitable for offshore operations. They lack range, endurance and an organic surveillance capability. They rely also very susceptible to weather conditions and they are vulnerable to air attack. Submarines are excellent denial vessels but conventional submarines cannot be used for many tasks, including protection of shipping.

Third, there is no single “best” solution to the problem of countering a submarine threat to our sea lines of communication. A modern well-handled submarine is a formidable opponent which by nature, possesses many advantages. But by co-ordinating the operations of a force comprising our own submarines, fixed wing aircraft, helicopters and surface ships, an effective anti-submarine force can be created.

Fourth, modern surveillance systems such as satellites, have not made the sea transparent. It is more difficult to hide at sea nowadays than it was, but it is not impossible. It must be stressed that ship mobility, decision making, satellite revisit times, systems inaccuracies and the problem of processing the enormous volume of information provided, degrade the value of modern surveillance systems. Additionally, the prohibitive cost of these systems has put them beyond the reach of all but the major powers.

Finally, in any future conflict at sea we must be able to control the three dimensions in the vicinity of our forces if we are to be successful. This calls for close co-operation between land based air and naval forces when land based aircraft are available, and identifies a need for organic air as it is for the land battle. Its applications include:

(a) Submarine warfare.
(b) Tactical reconnaissance.
(c) Air defence.
(d) Counter air reconnaissance.
(e) Maritime strike against enemy surface units.

Land based aircraft can play an important part in providing tactical air support, but the quick reaction necessary in modern warfare cannot be guaranteed by land based air alone. The three fundamental properties of carrier based air support which combine to give it a unique utility as a particular asset are mobility, the base or mobile air that can quickly change the focus of air operations to where it is most needed.

Air superiority in the face of some 200 land-based aircraft, the transit time is minimised, and aircraft going from the air base from the scene of action. With carrier-borne aircraft, the transit time is minimised, and aircraft going from the air base from the scene of action.

The organic capability of carrier-based air support allows it to be closely integrated into the tactical organisation of the force. The prime benefit is rapid reaction — a crucial factor in modern warfare. As well, there is no need to break radio silence, or to take the high risk of long period waiting.

Naval tactical aviation is an integral and essential component of modern naval warfare. Its continued presence significantly increases the effectiveness of the naval task force and severely limits the range of options available to a potential aggressor.

**CURRENT FORCE**

Now turning to what we have today — the present naval force can be broadly divided into three groupings.

Firstly, the surface strike and defence force consisting of a carrier (now in contingent reserve), guided missile destroyers, patrol boats and submarines augmented and then replaced by the new FFGs of which four have been ordered from the US: two of these —

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**THE NAVY**

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**THE NAVY**

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**THE NAVY**

January, 1983

Adelaide and Canberra — have arrived in Australia. The follow on destroyers are planned to be built at Williamstown Naval Dockyard during the 1980s and 1990s (subject to resolution of industrial issues).

We plan to replace our MCM vessels with Australian designed Minehunter Catamarans and we are investigating the means of providing a minesweeping capability. In addition, we are reviewing a mining capability with the purchase of the American Destructor Kits that will convert low drag bombs of up to 2000lbs in weight into modern sea mines.

Our Attack Class Patrol Boats are being augmented when replaced with the Fremanite Class, it being the first order but with Government approval to build another five, which will allow for expansion of our patrol capability as well as providing modern boats to reserve units. Some of the Attack class are to be made available for the Defence Co-operation program. However we may have to run some of the Reserve Attacks a little longer than we would wish because the build of the extra five has been deferred beyond the current FYDP.

I would like to remind you that in addition to the Fleet there is the very important shore support organisation of training establishments, dockyards, armament and stores depots without which the Navy cannot operate. Our shore support organisation, with the Fleet based over the years in a piecemeal fashion often without the necessary planning and construction to go with it. We now have HMAS Stirling in Western Australia as a modern Fleet base manned by Service personnel. Our main base at Garden Island in Sydney is being modernised in a programme that will take 16 years to complete. Likewise Williamstown Naval Dockyard is being modernised to allow it to build modern ships using modern techniques. A new base for our patrol boats has been completed at Cairns and the Darwin base will commission next month. The Brisbane Base for our amphibious ships is being improved.

**PROBLEM AREAS**

We will now mention some of our problem areas and possible ways of solving them. Firstly — manpower.

I have already mentioned, briefly, the importance of well-trained and highly skilled manpower in maritime defence. The capability of the Navy now is fully dependent on the skills we have now. (And, of course, in this regard we must not forget the 3500 Reserves who provide the basis for our expansion in time of war or emergency.)

Our total uniformed strength is just over 17,500 of which about 7% are women, and although our men and women have never been of a higher standard, manpower is an area causing us particular concern. The Navy is not alone, I'm sure, in finding it difficult to retain young men and women who have become to attractive civilian occupation by virtue of the skills and maturity the Service has helped to develop.

The Common pay rises have helped of course and they are already indicating that retention is improving and elective discharges are down. I believe it is not just the increased pay which is responsible for this improvement, it is the feeling that the Services are recognised as unique — not just a part of the Public Service in uniform. Civilian manpower is also causing us concern. You may be aware that the Navy employs a larger proportion of civilians than any other Service and we recently had a review of employment. The greater proportion of our civilians — 56% — are employed on major repair and refit support. The close control of civilian manpower levels by Public Service ceiling is markedly reduced our flexibility in areas requiring production capacity, and our ability to conduct detailed design investigations. There is an urgent requirement to streamline the recruitment and
Forward support bases in remote area could also be needed. A policy for its establishment and a Port survey program had already started. To a large extent it would be necessary to update our knowledge of the existing infrastructure upon which such forward bases would depend.

There is some doubt whether powers exist under current legislation to requisition civil assets and this aspect is being examined in consultation with the Attorney General's Department.

UTZ COMMITTEE

At this stage I should mention briefly the Defence Organisation Review, the UTZ Committee, which is nearing the end of its deliberations.

The report presented to Government in May last year has been well received by the services. Although the UTZ Committee's recommendations were not entirely personnel, the background to the UTZ Committee's conclusion for the future of the Department of Defence was quite unexpected and premature in the circumstances, and this is causing some problems. The equipment procurement process and procedures should be much improved by the Committee recommendations.

The final report, which is expected to be submitted to Government shortly, is bound to have a great impact on higher level Defence Management and the way the Department performs its task.

The Committee's recommendations will be particularly keen to see in the UTZ Committee recommendations improvements in the Force development process, the administration of civilian personnel and in the alignment of authority with responsibility, etc.

To summarise gentlemen, within the constraints of time, I have discussed strategy and the need for a Navy, particularly in relation to national security policy. I have dealt with some of the questions and criticism raised during the current debates and I have reviewed some of our problem areas and future prospects.

The Royal Australian Navy is a dynamic organisation it has been in constant change and it is ever changing circumstances. It is manned by excellent young men and women who provide us with a sound base on which to build for the future.

In the short term, however, the reality of our present economic situation and the deficit in the Defence dollar and this will be compounded among other things by the current drought and a general election within the next fifteen months.

Thank you for your attention. I will be happy to answer your questions.

CLOSING ADDRESS

By Commander W. E. B. Beeham, RAN

I don't believe that the idea of being a Silent Service ever had much going for it. Although I must admit it is better than the Air Force attitude, apparently inherited from its parent service, the Air Force of which David C. says, "It's greatest problem was that it believed its own propaganda".

And here in the one Australian city whose crest is distinctly naval - Sydney - long after the United States Navy has described Sydney as "the centre of the World Ocean", but it is apparent that a lot of Australians are not so perceptive about their own geography.

I am sure that our bosses would want me to thank the RSL for its generosity in making Anzac House and this auditorium available for us today. And I'm sure too that the Navy League and the Naval Association would like to extend their warmly to the Chief of Naval Staff for making them available. I don't intend to try and summarise what they have had to say, or our experiences of war in terms of press coverage. But I suggest it's your loss - but no one is going to be asking questions at the door.

The disadvantage they suffer from is that they cannot quite see what would it be like to sit in the hot chambers of the press, and I think that the Chief of Staff who was made to feel that way, like the rest of the services, has been privy to the public utterances - and this, of course, is true of any serving officer.

Now laid up in reserve and unlikely to see further service, the former MEL - RAN

So I propose to use the available to make a few controversial remarks about democracy, freedom of speech and the media (the Sydney media, particularly) and the Navy. Having been released from my vows of silence, it is too good an opportunity to miss. Of course, the Navy, as the Royal Australian Navy and the Royal New Zealand Navy, has been a great and loyal institution, particularly, if they want to.

I happen to hold a view which is not be considered widely held in a worldwide city like Sydney - a view that democracy cannot work satisfactorily, or perhaps at all, unless individuals have available to them the information on which to make their own decisions. And it's no good prating about freedom of information legislation unless the public, which in many ways today suffers from information overload, is given a balanced view of important issues. This places a grave responsibility on the media to live up to the freedom they claim - a freedom that we would all want them to have - and the power it confer to influence public opinion.

I do not share the view, as once parsoning and pessimistic, that the Australian electorate is stupid and selfish. On the contrary, there have been too many examples where, given a fair presentation of the facts, the Australian public has displayed very sound judgement.

Now it may be that, in every other matter for all I know, a fair balance is maintained in the media, but it is quite evident to me that a lot of the Australian media - and the Sydney-based media in particular - has wallowed in the luxury of opinion without the pain of thought, so far as the Navy is concerned, for the Navy is, after all, the rear echelon to this Fleet. For this reason the Australian public, democracy, and the Navy got a fair go.

Let me make it plain that I am a general criticism there has been a deficiency in the media. I believe I have been fair - but there has also been an influential majority which

has gone out of its way to present a view of the Navy and naval affairs which is not only unreasonable, but so close to being malicious.

I do not propose to go through a long list of examples but I am sure everyone who has been in the Navy and closely associated with the media has been presented with the examples of what I mean.

This dangerous activity there have been several techniques used:

One: If the news about the Navy is good, do not publish it.

Two: If the news about the Navy is bad, publish it to the whole: unbalance the report and turn a generally favourable account into a shock-horror story. One can only conclude that a bland report of the Committee's enquiry into the whole: unbalance the report and so turn a generally favourable account into a shock-horror story.

Three: To treat the Navy the understand, whisper, satirical comments which could be dangerous for the Navy.

Four: Do not print letters pointing out errors of fact and unreasonable judgements, or edit them to reduce their impact.

Five: Do not question the policies, false arguments and logical inconsistencies of those who attack the Navy.

A young friend of mine, still serving, said that he felt much as it was like being back in the schoolyard in primary school days, when one of the boys did something silly in class. The class would all take it up and then it does not seem to matter what you say or do, the class all concur in the general prevailing opinion no matter how overwhelming it is. I think it very sad that a decent young man who only wants to serve his country should be made to feel that way.

It is, for instance, that there has been no public analysis of the Kaiser Committee Report on aircraft carriers. Yet it is clear from this Committee and relies on controversial assumptions to escape the consequences of its own very well presented arguments why Australia must have an aircraft carrier. Or at least put on record outside the media that the fact that an unfavourable conclusion suits the anti-carrier position widely adopted an editorial policy. But it does not say much for balanced reporting.

Of course, criticism of the military in peacetime, or what we fancy calling the media, has been a particularly controversial democracies. What I cannot understand is why media critics of the Navy do not extend this same doocry to the Air Force and Army. For example, the Navy has been released from my vows of silence about the Navy and a few lives have been lost in the last 20 years, but there is not so much as a whisper about the Air Force, for example, the F111 where 2000 man Royal Marine Corps produced 5000 troops at short notice for operations in the Falklands. Now there are larger issues of the abuse of power by some democracies, but the difference so small that a decent young man who only wants to serve his country should be made to feel that way.

One: If the news about the Navy is good, do not publish it. And I believe I now declare that the Navy has gone out of its way to present a view of the Navy and naval affairs which is not only unreasonable, but so close to being malicious.

Thank you for your attention. I will be happy to answer your questions.

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E. B. BEEHAM, LTCDR RANR (Ret'd).

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THE recent NATO exercise ‘Northern Wedding ’82’ held in Danish Waters gave European observers a rare chance to see United States amphibious warfare ships at work. A party of American, British and German pressmen were flown to Esbjerg, a flourishing fishing and ferry port on the western side of the Jutland Peninsula, and from there we watched the US Marines landing in Amtracs and M60 tanks. The exercise simulated a resupply operation rather than an opposed landing and so there was no opposition from either ‘Orange’ forces or local Home Guard units.

On the second day we were lifted by Sea Knight out to the amphibious command ship USS MOUNT WHITNEY (LCC-20), which was one of two amphibious flagships commissioned in 1970-71. They were based on the LPH design and have accommodation for a crew of 700 officers and men as well as an additional 500 armed men of the amphibious command group. This group includes the commanders of the amphibious group and the landing forces, as well as the controllers of the tactical air group embarked in the carriers. The main function of the LCC is to give the task force commander control of all phases of the landing, with supporting intelligence and communications. Now, however, she has taken on the additional task of serving as flagship of the Second Fleet in the Atlantic. The passing of big cruisers left the US Navy very short of flagships, and now both the MOUNT WHITNEY and her sister BLUE RIDGE (LCC-19) have to do the job formerly done by the cruisers ALBANY and OKLAHOMA CITY.

Even more intriguing was the assault ship NASSAU (LHA-4), which we visited. Known as the ‘ship which has everything’, or from her designation and her frequent hurried departures, ‘Leaves Home Again’, she incorporates the previously separate functions of LPDs, LSDs and LPHs in one 40,000-ton hull, this means that she can undock LCUs from a giant docking well, fly marines ashore by helicopter and fly support missions with US Marine Corps AV-8A Harrier VSTOL aircraft. On this mission, for example, the NASSAU had embarked 11 Harriers, but in the Mediterranean in 1981 she had operated as many as 22 aircraft. Also operating with the amphibious group was the British LPD HMS FEARLESS, just back from the Falklands with her Commando Brigade.

As the NASSAU raised steam and weighed anchor we suddenly realised that ‘Ivan’ was closer than we thought. The Soviet KILDIN type destroyer PROZORLIVY had clearly anchored for the night among the LPDs and LSTs of the
ampibious task group, and had been caught somewhat unawares by the NASSAU’s sudden departure. Therefore the maintained station faithfully, presumably to monitor the Harrier operations. In addition three RAF Harrier Gr.3s were lost and a fourth was retained atshore at Port Stanley as shore CAP.

**ROYAL NAVY NEWS**

The Falklands conflicts has tended to overshadow several interesting developments, notably the cancellation of the sale of HMS INVINCIBLE to Australia, the ordering of a new Type 2024 patrol ship, and the ordering of a new Class of diesel-electric submarine and an order for a new class of minesweepers. The INVINCIBLE returned to Port Stanley last January, having been repaired and re-supplied in the Falklands after being badly damaged in a landing accident. The new Class of diesel-electric submarine is the so-called ‘Continental Shelf’ mine, using specially developed depth-keeping gear to keep their sweep down to 1000ft or more, and the new ships will take over this task, from regular sweepers, and in addition will provide the Royal Navy with new training tenders. Being intended to deal with bottom mines laid at the edge of the continental shelf they do not need the long-nose, magnetic signature of shallow draught minehunters, and the main requirement is good wire-handling gear and generating capacity.

**NEW FRENCH SHIPS**

The French Navy is following an unorthodox course in building a class of small training ships, as opposed to the more conventional 19th-century method of building larger ships. The idea is apparently to provide officers with sea experience and to give enlisted men the advantage of small-ship life at an early stage; as the same time the Navy gets small craft which can always be used for subsidiary duties in wartime, such as mine-sweeping or patrol work.

The eight ships of the LEOPARD class are modelled on trawlers and displace 463 tonnes. Twin diesels drive them at 15 knots and they have a crew of 21. The name-ships of the class were delivered last January, followed by the PANTHERE in February. The LEOPARD and LYNN are the next two and the rest will be completed by the end of next year.

**SHIPBUILDING IN GERMANY**

The lifting of the Common Market embargo on arms supplies has led to a spate of contracts at Blohm and Voss’ shipyard in Bremen. The last of four MEKO frigates, the SARANDI was launched on 31st August. The ships are the regular series of the MEKO frigates, and HERONIA is similar to the Nigerian ARADU, apart from having M40 Exocet missiles in place of the standard SS-N-2C anti-ship missiles on the Sarandi.

The four new minesweepers are the production version of the Type 2400 minesweeper, so-called because their intended surface displacement is to be 2400 tonnes, will start construction in mid-1983, and we understand that the RAN is looking at them as a follow-on to the OBERONS towards the end of this decade. They will, however, differ in having two extra diesels in an extra 8-metre section, which will also permit more fuel to be stowed, and fire control and weapon systems will be tailored to meet Australian requirements. The first British boat is almost certain to be called UPHOLDER, continuing the recent policy of repeating World War II names in sequence.

The ordering of a ninth frigate, actually the fifth of the stretched or improved BROADSWORD class, had been approved before the Falklands conflict, but it helped to confirm the outstanding reputation won by the BROADSWORD class and her sister BRILLIANT is battle. The BRILLIANT’s helicopter sank an Argentine patrol boat with her Sea Skua missiles and also helped to cripple the submarine SANTE FE at South Georgia, while the first operational firing of her Seawolf point defence missile system accounted for three A-4 Skyhawks over San Carlos Water. The new ships are longer to permit them to operate the Type 2402 towed array sonar more efficiently, and the third of the class will have the new Maritime Spey gas turbine in place of the Olympus and Tyne. Further proof of the RN’s view of the value of this class is that the Naval Staff has requested four more as replacements for the two DDGs and two frigates lost last May in the Falklands.

Little attention has been paid to mine-sweeping in the Falklands, which is surprising because two of the new ‘Hunt’ class MCM vessels went south to reinforce the five ex-civilian (Navy-manned) trawlers sent down with the Task Force. Two minefields were located and swept in Port Stanley harbour after the surrender, but instead of the sophistication increased mine-sweeping was found only moored contact mines. The one theory for their failure to use them in the Falklands is that they were being held back for use against Chile. Intelligence sources indicate that an attack on Southern Chile was to follow the occupation of the Falklands, and as such an operation was not expected the best military equipment and fitting units were kept back.

The new four minehunters are the production version of the EDATS or Extra-Deep Armed Team Sweep tenders which were converted from hired fishing craft a few years back. The ST-DAVIDS and VENTURER proved highly successful at sweeping...
WHAT IF YESTERDAY'S ENEMY HAD TODAY'S TECHNOLOGY?

Yesterday's battles might have been very different if our enemies had enjoyed the technological edge.

In today's warfare, modern processor based systems technology is more important than ever; a fact recognised by CSA, the leading Australian supplier of computer services and systems engineering.

An Australian-owned company with a staff of over 500, we have a vested interest in Australia's processor based defence systems. Our Systems Engineering Division specialises in operational and tactical support systems to EW, communications and ATE developments for the three services.

We don't make hardware. Our business is to provide better systems design, better software and total Systems Engineering service. No other company in Australia does it better than us.

This article examines maritime concepts of operations related to naval air power, indicating the interrelationship of different weapon platforms and systems and highlights the contribution that artificial intelligence, computer based systems, and precision guided munitions can make to achieving naval air superiority. The interrelationship of enemy’s surface combatants and air defenses are described, and the role of strategic strike operations to interdict shipping has increased dramatically in recent years.

In the absence of a comprehensive air defence system, the land-based strategic air strike capability of nations capable of land attack is a factor of great importance. The fundamental difference between a strategic and a tactical operation is the decoupling of the air and ground movement – land-based aircraft would gain air superiority and move the focus of its air operations some 1500 miles.

CAPTAIN OSCAR HUGHES

Air Craft Carrier Project Director

OSCAR HUGHES

Page Twenty

Maritime Concepts of Operations

by

CAPTAIN OSCAR HUGHES

Air Craft Carrier Project Director

Maritime Air Command

Maritime concepts of operations related to naval air power are described. The fundamental difference between a strategic and a tactical operation is in the interrelationship of the various weapon systems and the ability to reduce the range between the target and carrier in order to increase the probability of destruction.

TACTICAL STRIKE

The fundamental difference between a strategic and a tactical operation is the decoupling of the air and ground movement – land-based aircraft would gain air superiority and move the focus of its air operations some 1500 miles.

THE NAVY

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A number of important conclusions can be drawn from the foregoing discussion:

- Fighter aircraft: both sea and land based, are the only methods at present of providing the necessary response to such threats. Therefore, the presence of land-based fighter aircraft is a necessity.
- Without a land-based air attack Assurance System (ASW), Australia would be at risk of being forced to rely on its maritime forces to interdict enemy submarines. This would be a significant burden for these forces and would place an unacceptable strain on Australia's communications and logistics infrastructure.
- Land-based ASW provides several key advantages:
  - It can provide an assured response to enemy submarines, allowing Australia to maintain a credible threat and deter potential aggressors.
  - It can provide a sustained presence in areas of strategic importance, such as the South China Sea and the Western Pacific, where Australia's interests are most at risk.
  - It can be integrated into Australia's overall defenses and command and control structure, providing a comprehensive and coordinated approach to maritime security.

The significance of the recent decision to acquire an aircraft carrier for Australia is that it signals a renewed commitment to the nation's defense and security. This decision is based on a thorough and rigorous analysis of the options available to Australia, and it is one that will have far-reaching implications for the country's future. It is clear that Australia must take action to secure its interests and prevent the threat posed by submarines. The acquisition of an aircraft carrier is a key step in this process, and it will ensure that Australia is able to provide a strong and sustained maritime presence in the regions where it is most needed.

The Carrier Switch

The reported decision by the Defence Force Development Committee to recommend against the acquisition of an aircraft carrier is a timely and necessary action. The committee's recommendations are based on a careful and thorough evaluation of the options available to Australia, and it is clear that the acquisition of an aircraft carrier is not in Australia's best interests. The committee's decision is based on a thorough and rigorous analysis of the options available to Australia, and it is one that will have far-reaching implications for the country's future. It is clear that Australia must take action to secure its interests and prevent the threat posed by submarines. The acquisition of an aircraft carrier is a key step in this process, and it will ensure that Australia is able to provide a strong and sustained maritime presence in the regions where it is most needed. The Carrier Switch is a key move in this direction, and it is one that will strengthen Australia's ability to protect its interests and maintain its standing as a major global power.
Government decided in September, 1980, to replace Melbourne with a “purpose built” ship — a helicopter carrier with the capability to operate STOL aircraft — and in February, 1982, approved the purchase of the INVINCIBLE. As a well-known British carrier, it would not be possible to order a new ship to suit the Invincible class, since the United Kingdom has already ordered a carrier to be built for the British Navy. The only test that really matters — the Acid Test of War — had proven itself handsomely. Melbourne’s replacement is widely accepted here and abroad that the national climate has changed for the better since 1980. 1981-82 in the economic situation. As the Navy obtains the new class of ships, it is increasingly argued that the country has a good case for additional funds; convincing the Government of the country’s requirements would seem a better case than trying to devise a Defence Force to suit an inadequate sum of money. It is hardly surprising, then, that the single most important proposal to be announced since 1980 is the proposal to enlarge the Navy by the addition of a helicopter carrier, a force of which will make it possible for the country to defend its interests in the South Atlantic, the Indian Ocean, the Persian Gulf, the Caribbean, and the western Pacific. If the new carrier is to be built, it must be seen that the three conditions are met — the political climate is changed for the better, the country has a good case for additional funds, and the country’s requirements have not changed. 1980. When the three conditions are met, a change in the political climate will be seen as an opportunity to expand the country’s military capabilities. The three conditions are met in the country’s case for additional funds. The country’s requirements have not changed. The three conditions are met in the country’s readiness to expand its military capabilities. MOTHERLAND’S CHAMPIONS The Falkland Islands campaign — Presentation

A presentation of the Battle of the Falkland Islands campaign — a veritable example of the power of man and machine in combat — was given on November 29, 1982, at the NSW Branch of the Navy League of Australia, 30 NAPOLEON STREET, SURRY HILLS, BYRON HOBART TAS. The presentation was given by Rear Admiral Andrew Robertson,who outlined the concern of the Navy League in the campaign, the Royal Navy’s actions, the role of the merchant marine, industrial support, and the significant effort of the Royal Air Force in the campaign. The presentation was well received, and the audience was impressed by the professionalism and dedication of the Royal Navy and Royal Air Force in the campaign.

Admiral Robertson pointed out the value of studying carefully the Falklands War in order to improve the country’s understanding of the importance of the Falklands to the country, and to improve the country’s readiness to expand its military capabilities. He also stressed the importance of the Falklands to the country’s security and the importance of the Falklands to the country’s economy. Admiral Robertson pointed out the value of studying carefully the Falklands War in order to improve the country’s understanding of the importance of the Falklands to the country, and to improve the country’s readiness to expand its military capabilities. He also stressed the importance of the Falklands to the country’s security and the importance of the Falklands to the country’s economy.

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FALKLANDS AND THE INVINCIBLE — 1914
by ROBERT KENDALL PIPER

The story of a habit of repeating itself and so it was in December 1914 that another British INVINCIBLE was involved in a mighty sea battle against the Germans off the Falkland Islands.

In those days INVINCIBLE was a dreadnought battle cruiser boasting eight twelve inch guns, instead of Harrier aircraft and missiles though with a displacement and speed comparable to a cruisers boasting eight twelve inch guns instead of Harrier aircraft and missiles though with a displacement and speed comparable to a cruiser. Admiral von Spee. Two British cruisers were lost with all hands off the coast of Chile in what was later named the Battle of Coronel.

HMS INVINCIBLE as flagship, with Admiral Sturdee, as well as its sister ship INFLEXIBLE were immediately and secretly despatched to the South Atlantic to combat the threat of the German cruise. An English naval squadron only a month earlier had suffered a crushing defeat by the enemy commanded by Vice Admiral von Spee. Two British cruisers were lost with all hands off the coast of Chile in what was later named the Battle of Coronel.

HMS INVINCIBLE as flagship, with Admiral Sturdee, as well as its sister ship INFLEXIBLE were immediately and secretly despatched to the South Atlantic to combat the threat of the German cruisers. Arrival at the Falklands on 7 December 1914, they rendezvoused with five other cruisers as well as the old battleship CANOPUS and armed merchant cruiser MACDONNA. Sturdee had not intended to depart until the following evening and planned to spend the intervening time re-coaling his ships. Admiral von Spee approached Port Stanley cautiously on the morning of December 8. His cruisers, GNEISENAU and NURNBERG had rendezvoused ahead in what was planned as a surprise action to destroy the wireless station, coal bunkers and any itinerant shipping found straggling close by.

His approach however had been detected by a shore based observation group at 0750 and word was quickly relayed to Sturdee and his vessels below. CANOPUS fired first shots towards the GNEISENAU at a distance of some eleven kilometres; her shells being directed by a gunnery officer ashore in an observation hut. Splashes were seen to rise only a hundred metres short before the intruder and her friends retreated rapidly out to sea.

Within two hours the full British squadron had raised steam on their coal fed boilers, weighed anchor and proceeded through the harbour entrance minefield. The chase began.

By 1100 INVINCIBLE and the other English warships were in hot pursuit and could see that they were gaining ground as black smoke poured from their funnels and speeds worked up to 25 knots.

Foul weather had been replaced by a calm sea and clear skies with maximum visibility. There was no rain, mist or storm in the icy sea.

The battle now began in earnest with INVINCIBLE ranging down with her beam ends. Remnants of the crew could be seen walking on the freezing ice.

 range has narrowed to sixteen kilometres. LEIPZIG was now in range and Sturdee, taking no chances, kept his dreadnoughts out of range of the enemy's smaller eight inch guns while he pounded away with his own twelve inch shells. Each time the German ship tried to narrow the gap he wisely edged away. With his superior speed and weapons, providing the weather remained clear, he knew it was only a matter of time before success was in his grasp.

Briefly after three in the afternoon the pursuers noticed that the GNEISENAU had taken a list and the SCHARNHORST was down with his ship; there were no survivors.

Meanwhile the GNEISENAU refused to surrender and was caught and sunk. So ended a series of chases and actions which then came to be known as The Battle of the Falklands. Of the five German cruisers and three colliers only the DRESDEN and one collier escaped. A handful of casualties were suffered by the British but the German Navy lost some two thousand men. These included von Spee's two sons, Heinrich who served on the NURNBERG and Otto with the NURNBERG. A special German medalation was later struck depicting the three and commemorating their gallantry.

DRESDEN was eventually caught in March 1915 and scuttled by her crew at the Chilian islands of Juan Fernandez. INVINCIBLE was lost in the Bay of Ushuaia (off Denmark) on 31 May 1916. This time she was under the command of Admiral Hood with Captain A. L. Clay as flag captain. In a running fight with DRESDEN and KÖNIG she

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The Trade Practises Act, 1971 came into force on October 1, 1971. There are no exceptions to the Act which can be varied by advertisement. All advertisers must comply with the requirements of the Act.

1. Full particulars of all claims must be supplied to the advertising agency. The Act is the responsibility of all advertising agencies.

2. All claims should be made in good faith and the advertiser should not make any representation concerning the price or characteristics of any product or service.

3. All claims must be supported by satisfactory evidence. The evidence must be available to show the truth of the claim.

4. If the claim is not made or is altered, or if the evidence is not available, the claim must be removed or altered.

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9. If the claim is not made or is altered, or if the evidence is not available, the claim must be removed or altered.
January, 1983

"When you go for cover
Go for Fabric Products cover!"
NEW DEFENCE FORCE HELICOPTERS

Eighteen Ecureuil (Squirrel) helicopters will be purchased to replace light helicopters in service with the RAAF and the RAN.

The Minister for Defence, Mr Ian Sinclair, recently announced the signing of a contract with Societe Nationale Industrielle Aeronautique et Spatiale (SNIA) of France for the helicopters.

Of the 18 helicopters, 12 will replace the RAAF’s Iroquois UH-1B models of No 5 Squadron, Fairbeirn, ACT, as training aircraft, and six will be used by the RAN for light utility and survey work. Some of the six are likely to embark in the Navy’s new FFGs as an interim arrangement subject to successful flying trials.

The selection of the French firm was made after a world-wide request for proposals to meet the RAAF/RAN requirement, followed by a competitive tendering process involving three major manufacturers.

The contract for supply of 18 Ecureuil helicopters is valued at $13,423m at current exchange rates. The total project cost, which includes the initial spares, ground handling equipment, technical documentation and other associated support services, is estimated to be $13,598m at December 1981 prices.

The contract for supply of the helicopters includes a substantial Australian Industry Participation (AIP) obligation.

The Ecureuil is a five-seat helicopter, with a range of 400 nautical miles and a cruising speed of 121 knots. It is powered by a Turbomeca Ariel engine. Over 700 are in service in 33 countries. The helicopters are to be delivered during late 1983 and early 1984.

LAUNCHING OF HMAS IPSWICH

HMAS IPSWICH, the RAN’s newest patrol boat, was launched at Cairns, Queensland, on Saturday, 25th September, 1982.

IPSWICH is the seventh of 15 Fremantle class patrol boats being acquired for the RAN. The lead ship was built in Britain, and North Queensland Engineers and Agents (NQEA) of Cairns has the contract for the other 14. So far five ships built by NQEA have entered service with the RAN. They are HMAS WARRNAMBOOL (March, 1981), HMAS TOWNSVILLE (July, 1981), HMAS WOLLONGONG (November, 1981), HMAS LAUNCESTON (March, 1983) and HMAS WHYALLA (July, 1983).

IPSWICH will be named after the World War II corvette which is named the city of Ipswich (Qld). The original ship was built by Evans Deskin & Co Pty Ltd at Brisbane in 1941 and served in the Mediterranean and the Indian and Pacific waters.

Westland Sea King helicopters fitted with THORN-EMI “Searchwater” advanced marine surveillance radar from HAMS ILLUSTRIOUS which is now in the South Atlantic.

The installation was completed in record time with performance in trials proving outstanding.
and female students, including cadets from overseas countries, officer undergraduates and officer postgraduates.

Academy officer cadets will be recruited by the individual Services, as at present, and will complete a full program of military training during each year at the Academy. High school students now in years 8 and 9 will be eligible for entry to the Academy when it is opened in 1986.

**HIGH AND DRY** — Pictured on the slipway at the HMAS STIRLING, naval base in Cockburn Sound, Western Australia is the “Attack” class patrol boat HMAS AWARE. The 142 tonne patrol boat underwent a refit before being transferred to the Adelaide Port Division of the Naval Reserve for training purposes in November. Commissioned in 1968, HMAS AWARE was previously based at Darwin in the Northern Territory.

**HMAS BALIKPAPAN VISITS HMAS STIRLING** — The Landing Craft Heavy, HMAS BALIKPAPAN visited HMAS STIRLING when it opened in 1986. The dimunitive 223-tonne LCH is pictured here at HMAS STIRLING tied up forward of the 8000 tonne US Navy guided-missile cruiser USS FOX.

Students attending the Academy will study for first and higher degrees in arts, science and engineering.

An agreement under which the University of New South Wales will accept responsibility for the academic integrity of the Academy was signed in Canberra last year.

The Academy has two basic aims: to provide military education and training of officer cadets and to provide, in a military environment, a balanced and liberal university education as a foundation for officers’ careers in the Defence Force.

**NEW FRIGATES**

The Canadian Potted Frigate (CPF) Programme passed another significant milestone on 4th October, 1982, when two competing contractors delivered to the Government their detailed proposals to build six new patrol frigates for the Royal Canadian Navy.

Saint John Shipbuilding and Drydock Co Ltd, St John, NB, and SCAN Marine Inc, Longueuil, Que, had been awarded Government contracts totalling $39.4 million, 7 July, 1981, to conduct the CPF contract definition phase of the program. The $591 million CPF program began in December 1977 and will result in the construction of six new ships to replace six ageing St. Laurent-Class destroyers in the late 1980s and early 1990s. The ships are required to maintain national roles of sovereignty and surveillance and to meet our NATO commitment to contribute to a credible naval deterrence force.

The two proposals will be evaluated over the next few months and recommendations submitted to the Government. A decision by Canberra on the selection of a prime contractor for the six ships is expected in mid-1983.

**MULTI-NATION MARITIME EXERCISE**

A multi-nation maritime exercise involving naval and air units from Australia, New Zealand and Canada, and aircraft from the United Kingdom, was held in the Tasman Sea and around the coast of New Zealand from 11th to 20th October, 1982.

The exercise, Tasmanex 82, involved three surface ships and two submarines from the RAN, two P3 Orion and four F111 aircraft from the RAF, three surface units from the RNZN and maritime reconnaissance and strike aircraft from the RNZAF; four surface ships and maritime reconnaissance aircraft from the Canadian Maritime Forces; and one Nimrod maritime reconnaissance aircraft from the RAF.

The Australian naval contribution included HMA Ships HOBART, PERTH and SUPPLY, and the Oberon class submarines OTAMA and OXLEY.

Tasmanex involved a comprehensive series of exercises at the surface group crossed the Tasman, including a simulated maritime war in the vicinity of Lord Howe Island. The surface forces faced an opposed entry into Cook Strait in mid-October, and later sailed up the east coast of the North Island, facing a series of challenges from submarines and aircraft.

**NAVAL RESERVE UNIT FOR DARWIN**

The Minister for Defence, Mr Ian Sinclair, announced on 4th October, 1982, that a new Royal Australian Naval Reserve Port Division was to be established in Darwin, the first new port division to be created in more than 30 years.

The establishment of the Darwin-Division was referred to by the Prime Minister in his speech at the official opening of the Darwin Naval Base by Her Majesty, Queen Elizabeth.

Currently the RANR has 1070 personnel attached to Reserve training establishments, 41 Reservists in the Mercantile Marine, and a total of 2376 men and women in the Reserves without training obligations but who are available for periodic full-time duty in a variety of specialist categories.
The new deep water passage through the Great Barrier Reef, to be known as Hydrographers Passage, which RAN hydrographic surveys have discovered.

The decision to explore for a new deep water passage through the Great Barrier Reef was made by the RAN in the early 70s. It followed the expansion of the coal exporting port of Hay Point, and the requirement for the Navy to be able to deploy its ships rapidly from the coastal route near Mackay into the Coral Sea.

Mr Sinclair said naval hydrographers had examined aerial photographs and satellite imagery of the Great Barrier Reef to determine the most likely area and, in 1977, the patrol boat, HMAS BARBETTE, carried out a reconnaissance of the area.

In 1978 the survey ship, HMAS FLINDERS, based at Cairns, completed a preliminary survey which followed on previous surveys of an inner coastal route carried out by two RAN surveying ships, HMAS BARCOO and HMAS WARREGO in 1955 and 1959.

In the most recent survey, which began in September last year and was completed in April this year, HMAS FLINDERS carried out over 10,000km of soundings and succeeded in delineating a deep water passage suitable for deep draught vessels. Mr Sinclair said.

Two mine hunting ships of unique design are to be built for the RAN at the new deep water passage. The contract was won by the Thames New Barrier Reef Passage Co., a joint venture between Thames Engineering and the Royal Australian Navy. The ships will be over 300 feet long and with a catamaran hull, will be the first of their type in the world. The first two ships would be prototypes and the contract being negotiated with Carrington would contain an option for production of further vessels.

Two of the New Zealand firms involved in the manufacturing of the vessels are:

- Arrow Electrics Ltd
- Jackson & Taylor (Auckland) Ltd

The decision to proceed with production would be dependent on favourable results from a comprehensive trial and evaluation programme, during which the effectiveness of the British-built and the New Zealand-designed vessels could be determined, as well as its vulnerability to pressure, acoustic and magnetic mines.

A successful conclusion of the trials would see the Navy place an order with the winning firm.
**Combat Fleets of the World 1982-83**

Edited by A. D. BAKER III
Published by The Naval Institute Press

The latest edition of *Combat Fleets of the World*, 1982-83 is now appearing in bookshops around Australia. It is the fourth English language edition made available to the Naval buying public and in every way is a superbly presented publication.

Spanning more than 890 pages, the book is 15% longer than the previous edition and includes the warships and auxiliaries of some 140 countries. Many of the illustrations are full page photos, ie. 25mm x 20mm including 100 additions from the previous volume.

But the thing I enjoyed in *Combat Fleets* was its no-nonsense approach. The ships are easy to find, the data is presented in tabular form followed by remarks ranging in length from one to a few hundred lines. Many of these ships are depicted through professionally drawn line drawings, most of which are keyed to indicate sensors and other equipment. As a result, the photos of the ships many detailed views have been reproduced. The quality of all photographs is excellent (save the usual one or two Soviet).

Combat Fleets also provides the naval aviation capabilities of each country, the weapons and sensors carried by the Fleet together with a list of warships in service or under construction as of 1st January, 1982.

As an update two addenda bring readers into the Naval scene through to 1st February and then to 1st March. From Alabama to Zanzibar, Combat Fleets of the World 1982-83 is a credit to the editor. It has given me many hours of reading and viewing for all shiplovers, naval buffs and warship photographers. To round off this excellent reference book a comprehensive index of ships is provided.

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**CORVETTES**

By IRIS NESDALE
Published by Iris Nesdale
Price $20

For many years I had heard of a book on the Bathurst Class Australian Minesweepers, better known as Corvettes. At last the reader can acquire such a publication through the efforts of Adelaide writer Mrs Iris Nesdale.

To complete her book Mrs Nesdale spoke to dozens of ex-Corvette men researched through official files and documents and obtained an impressive selection of photographs to illustrate her work.

The result is a hardcover book of 280 pages plus, printed on quality paper with excellent photographic reproduction. In my readings I found only one incorrect photo (a River Class Frigate, captioned as a Corvette) and a misplaced caption. Overall the book is a comprehensive history of the class with many personal reminiscences. It is supported by a brief career of each Corvette and special tables listing specifications, construction details and dates. Highly recommended.

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**British Warships since 1945**

Part 1 of British Warships since 1945 described the battleships, Air Craft Carriers, Cruisers and Monitors of the Royal Navy.

The second book describes in the same familiar, brief statistical and career summaries, the carriers, cruisers, destroyers, maintenance and repair ships.

The majority of the warships illustrated are the famous names, shown as built and as modernised during the 1950s and 1960s. Magnificent photographs occupy the entire page and include a number of the T class which operated in Australian waters in this period.

Wright and Logan, the well known naval ship photographers of Southsea provided all of the prints save one of HMS *METEORITE* the former German U-Boat, U1407 which was active from 1941 to 1949.

Most of the classes of submarines are prefaced by brief introductions before the statistical and career data. All in all a compact, well written study of the post war British Fleet. Recommended.

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**Devonport built Warships since 1860**

By LCDR R. V. BURNS, DSM, RN
Published by Maritime Books

Within this 110 page book, LCDR BURNS has included histories and brief technical details of the numerous ships of war built at Devonport since 1860. These include such famous names as *Lion*, *Centurion*, *Royal Oak* and *Exeter* together with some not so renowned ships like the first class torpedo gunboat *Hussar*, the Pigmy class first class gunboat *Partridge* and the mooring vessel *Moorfire*.

A good selection of photographs accompany the text including Australia's aircraft carrier SYDNEY and the cruiser HOBART (as Appollo). Some other RN ships are also allotted space including ENCOUNTER, J5, J7, PSYCHE. Well worth the reading, recommended.
The two French carriers Clemenceau and Foch were built to keep France in the ranks of first-class naval powers.

Similar in size and appearance to the US Essex Class, they were designed to carry a heavier-than-usual AA gun armament. Their stacks blend with the island superstructure, as with US carriers. The vessels are too small to operate large modern carrier aircraft, and possibly too much has been attempted on their displacement. However, these now ageing ships do make France the world’s third carrier power. There are plans to replace both with nuclear-powered carriers during the next 10 years.

Italy, the only other current aircraft-carrier naval power in the Mediterranean, is somewhat more conservative, and designed a vessel more in line with the restricted defence budgets of European countries today, the Vittorio Veneto, classed as a helicopter-carrier cruiser, is the largest vessel in the Italian Fleet, and doubles as flagship. An improved, enlarged, and re-classified Caio Duilio Class, she is a most effective vessel, ideally suited for A/S warfare in the restricted waters of the Mediterranean.
By the time these words appear in print, some readers and League Members may be beginning to feel that the lessons of the Falklands Islands War may have been reviewed widely and sufficiently without yet another treatise.

However, there is one lesson which is particularly pertinent to organisations such as the Navy. Future leaders must be dedicated as it is to bring public attention to the importance of maritime defence and the dangers of its neglect by Australia.

This lesson concerns the British Secretary of State for Defence, Mr John Nott. Our sister magazine "SEAPower" of the Navy League of the United States, addressed (in its July edition) the political lessons of the Falklands in words which put the case clearly and succinctly: "It is not enough to be militarily strong. A nation must also be perceived by other nations as militarily strong — and to be willing to use its strength for the interest of vital interests. The validity of that lesson can easily be tested by asking: if Argentina, no matter how just its cause, would have attempted to take the Falklands if the islands had been under Russian occupation?"

"There is no bargain basement way to defend oneself against aggression. Wishing and hoping for a perfect world, or structuring one's forces in a co ordinate manner to be 'affordable' rather than what is militarily effective, is the surest way to military disasters — and in the long term the most expensive defence programme of all."

Defence Minister Nott, who was appointed in January, 1981, either failed to perceive, or ignored, these lessons.

He made the mistake, and persuaded the Government of which he was a member, to make the mistake, of trying to structure Britain's Defence Forces in accordance with what he thought Britain could afford. He failed to perceive that in so doing he was committing his country to an operation or had lost the actual battle hardy be contemplated.

The Nott plan to discount maritime defence ignored Britain's maritime allies. In an interview with INTERNATIONAL DEFENCE REVIEW at the end of 1981, recorded on page 1944, issue 12/1981, the interviewer commented on Minister Nott's admission that the number of destroyers and frigates in the British Navy had been farce substantially reduced, with the remark that "This is certainly viewed from outside the UK by people who take something of an interest in it as being not exactly beneficial to the strength of the Royal Navy."

Minister Nott responded "The view of those outside the UK who take this view is an important one."

Setting aside this very pertinent demonstration of the veracity of the old adage "Arrogance is the refuge of the debater without a cause", Minister Nott demonstrated his failure to perceive two very important facts:

• The questions reflected a deep concern on the part of many knowledgeable on defence matters. Such experts would not have raised the points had they not judged the Nott plan to reduce maritime defence to be unacceptably damaging to the maritime defence of Britain.

• Britain is a member not only of the NATO Alliance but of a much broader and less formal Alliance of Western Democracies. The Nott plan concentrated upon maintaining one aspect of the NATO Alliance, but ignored NATO's flanks and the rest of the Western Democratic Alliance.

No Minister of Defence of a nation in an Alliance can expect his misjudgments, which have a serious adverse effect on other members of that Alliance, to go unremarked and uncorrected throughout that Alliance.

History will have the opportunity to judge Minister Nott. History will judge the full extent of Nott's failure. History will have that, in allowing him to resign, Nott got off lightly.

The Navy League of Australia should learn the lessons of Minister Nott's misjudgments and apply these lessons to the pursuit of the League's objectives by investigating the principle of the decrements. By the unqualified exposure of Minister Nott's errors, the League can and must make it clear to Australian politicians, who may be tempted by the concept of only having the defence we can "afford" to judge in the short term, that those Ministers' errors of judgement or negligence will be ruthlessly exposed.

January, 1983

THE NAVY
The last few months have seen a great deal of activity at TS MILDURA, currently believed to be Australia’s most inland Naval Cadet Unit.

At the end of June some fourteen (14) Cadets and three (3) Instructors under the command of Lieutenant Scott Smith, NRC travelled to TS BARWON, Geelong to take part in the parade of Naval Cadet Units through Geelong at which the Freedom of the City of Geelong was conferred on TS BARWON.

Over the weekend of 30/31 July/1 August a party of three (3) Officers, three (3) Instructors and fourteen (14) Cadets under the Command of Lieutenant H. A. Goodall, NRC, Officer Commanding TS MILDURA, undertook a survival camp in the Koorong Lakes area of Sunraysia in the Shire of Mildura, Victoria.

Cadets received instruction and practical experience in survival techniques, map reading, living off ration packs and making way across country using compass readings.

For the first time at the Unit, several intending girl Cadets under the charge of Petty Officer Susan Millar, NRC, an ex-WRAN look part in the Camp.

On the 3rd August, Cadets commanded by Lieut H. A. Goodall, NRC, mounted a Guard of Honour for the relay team carrying the Queen’s Baton containing the Royal Message for the Commonwealth Games in Brisbane, when the relay team passed through Mildura. The Guard was provided at the request of the Mayor of the City of Mildura.

During the May and August 1982 school holidays some fortunate Cadets from TS MILDURA will gain experience as deck and general hands on the Murray River Paddle Boats PS COONAWARRA and PS WANERA which operate five (5) days cruises from the Port of Mildura. This was made possible after Lieut Scott Smith approached the Company owning the Riverboats and concluded the arrangements for Cadet experience on the river boats.

16 Cadets including several girl Cadets, accompanied by Officers and Instructors and under the command of Lieut H. A. Goodall, NRC, held a sailing instructional weekend camp at Lake Hawthorne over the weekend of 24th to 26th September. Cadets camped overnight at TS MILDURA — at the Drill Hall, Mildura and left for the lake early each morning.

The Unit now has its own boathouse at Lake Hawthorne which was erected by the Unit itself.

A comprehensive programme of sailing instruction was given to all the Cadets present, including coming alongside, righting a capsized boat and racing.

The camp concluded with a BBQ on the Sunday afternoon.
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Application for Membership

To: The Secretary
The Navy League of Australia

To promote, sponsor and encourage the interest of qualified professionals and imaginative "amateurs", all a mixture of young and not-so-young people, of highly country. You will be joining a sizeable group of citizens, members of the Navy League of Australia, which is very much involved with the maritime world.

To the majority of The Navy's readers — the non-members — we in The Navy League extend an invitation to join us in actively promoting the well-being of our country. You will be joining a sizable group of citizens, a mixture of young and not-so-young people, of highly country. You will be contributing in one way or another to the maritime strength of Australia — essential to the survival of our country in these turbulent times.

Don't just read about the activities of the Navy League and be a spectator of events — join us and contribute your knowledge, experience or simple enthusiasm, and be a 'player' yourself.

The Objectives of The Navy League of Australia

(1) To keep before the Australian people the fact that we are a maritime nation and that a strong navy and a sound marine industry are indispensable elements of our national well-being and vital to the freedom of Australia.

(2) To promote, sponsor and encourage the interest of Australian youth in the sea and sea-services, and support practical sea-training measures.

(3) To co-operate with other Navy Leagues and sponsor enthusiasm, and be a "player" yourself.

CONTRIBUTE YOUR KNOWLEDGE, EXPERIENCE OR SIMPLE STRENGTH TO THE NAVY LEAGUE OF AUSTRALIA

THE NAVY LEAGUE OF AUSTRALIA
Application for Membership

To: The Secretary
The Navy League of Australia

1. Division:

To join the Navy League of Australia with whose objects I am sympathetic.

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Signature

Enclosed is my cheque/postal order for $100 being my full refundable subscription (include four copies of The Navy League magazine).

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THE NAVY MAGAZINE

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The Return of the Big Gun to Blue Water
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Book Reviews
RAN Participation in Coastal Surveillance
The Gun — Is It Still A Required Weapon?
Submarines Galore
USS OLYMPIA
Further Reflections on the Falklands and INVINCIBLE.
D Class Cruisers in New Zealand
Navy League Divisional and Cadet News

The United States Navy’s nuclear-powered submarine USS LOS ANGELES arrived at HMAS Stirling in Western Australia for a six day visit on 20th January. This 6000 tonne nuclear-powered submarine was the first to visit the base for rest and recreation purposes in 1983. (Photo — LSPH Steve Given, RAN)

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The United States Navy’s nuclear-powered submarine USS LOS ANGELES arrived at HMAS Stirling in Western Australia for a six day visit on 20th January. This 6000 tonne nuclear-powered submarine was the first to visit the base for rest and recreation purposes in 1983. (Photo — LSPH Steve Given, RAN)
Some familiar arguments and emotions concerning the whole battleship rationale have emerged from beneath the surface with the re-commissioning of the “Iowa” class battleship USS “New Jersey” (BB-62).

Phase I has her returning to the Fleet with her main battery of nine 16-inch rifles in three triple turrets still intact. The mandatory electronic equipment update has been accompanied by the addition of the Vulcan-Phalanx 20mm “Gatling”-gun rotary guns or the more powerful and new 30mm “Goalkeeper” system based on the General Electric GAU-8 “Gatling”-type gun; the integrated missile systems. At least two of the remaining three “Iowa” class battleships are due to follow the “New Jersey” back into service.

This last weapon could be replaced by the new 8-inch single mount although, obviously, this could complicate the ammunition supply and make more difficult the eyeball spotting of the fall of shot when firing at water-born targets. It is interesting to note that these two problems were an issue 75 years ago in the era of the mixed armament pre-dreadnought BB and were largely eliminated by Admiral of the Fleet Lord Fisher and his design team when HMS “Dreadnought” joined the Fleet.

For sea-air defence, a pair of Mk 26 missile launchers, disposed one forward and one aft, are included in the design as well as the 20mm Vulcan-Phalanx rotary guns or the more powerful and new 30mm “Goalkeeper” system based on the General Electric GAU-8 “Gatling”-type gun; the integrated missile systems.

The repetitive nature of history being what it is, I am tempted to wonder whether or not the author of the original “Proceedings” article had his mind back to April 26, 1941 when HMS “Abercrombie” was laid down. She displaced 3917 tons, was 373 feet o.a. and possessed a breadth of 89 feet and a 14 feet draft. She had a maximum speed of around 12 knots.” Abercrombie” together with her sister HMS “Roberts”) were the last in a long line of heavy calibre fire-support ships built for the Royal Navy and used by the British in two world wars and known generically as “monitors” (Only the Italians built a similar ship). The “Faf di Bruno” displaced 3900 tons, was armed with two 15-inch guns in a peculiar single circular turret and was protected by a concrete cofferdam. Laid down in October, 1915, she was powered by two old discarded Thornycroft MTB engines which provided her with a mind-bending continuous sea (?) speed of 2'/4 knots. She survived to provide Ceylon with her protection as a floating battery into the Second World War.

The layout of the British monitors was almost identical to the proposed BBL, however, unlike the BBL, they were never intended to fight a ship-to-ship action which they would have survived only by sheer good fortune. Indeed, the great war’s HMS “Raglan” (6150 tons, two 14-inch gun, triple-expansion steam engines, 7'/4 knots) did not survive an encounter with the battlescruiser “Glorious” (ten 15-inch guns). However the basic concept of the monitor design, i.e., to get battleship armament into a ship of the size of a conventional ship-to-ship conflict contains in a future war, there appears to be nothing either existing or projected in the Soviet Fleets inventory which could survive a ship-to-ship encounter with a heavily armoured BBL. Neither armoured techniques involving ceramics and plastics could impart protective qualities that were unknown in the days of purely hard-faced conventional steel armour.

Because of their appreciably shallower draft they could be expected to do the job of a battleship in a percentage of its operations, and when exceptionally high-risk operations involving armoured ships are concerned, it makes greater sense to utilise the semi-expedientally manned BBL than a high-value BB. This would make even greater sense if the 16-inch guns were provided with Rocket Assisted Projects which extend the useful range to 50 miles.

The BBLs would have the speed, range (with diesel) and size to make ideal flag-command ships for either invasion fleets or convoys. Lastly, because their armament does not have to be designed (or alone built) and thus the remainder of the vessel is largely conventional, they would be cheaper to maintain and they could be important as vessels to build and maintain. Never were there vessels more appreciated than in these days of almost universal improvisations.

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The fly-past marked part of Sydney's welcome to the 45,000 ton cruise ship at her berth at Sydney Cove.

Her most dangerous moments came on 21st May, when she came under air attack for some ten hours while lying in San Carlos Water to disembark troops. Happily the ship escaped damage, the courage of the volunteer crew at that time earning for the ship a deep loyalty from the embarked forces who gave her the affectionate name of 'The Great White Whale'. At the end of the day CANBERRA's Captain, Captain D. J. Scott-Masson, sent the following message to P & O headquarters in London: 'Have survived our first prolonged air attacks and all ship's company still in good heart having delivered their passengers as required'.

CANBERRA later took troops from the liner QE2 in South Georgia and sailed into San Carlos Bay a second time to deliver them ashore. She landed the majority of the land forces to the Falklands.

The ship was due in at 0700 on the previous day, and went straight into Vospers No 1 fabrication shop where work started as it was unloaded. However, such trivialities were no problem to Vospers. They simply cut the front of the workshop and soon had the structure out and onto two barges which were used to float the assembly across to the ship.

Work on the helideck abaft the bridge and directly above the upper deck swimming pool was completed before the ship sailed, but the second helideck proved more of a problem, and so a team of volunteer welders, painters and caulkers sailed with the ship in order to complete the work; with the intention of disembarking at Ascension Island.

A second helideck position eventually turned out to be in front of the bridge, but a third option was available just forward of the funnels, on the same deck as the first platform. The third option, however, would have meant either removing the small deckhouse at this level, or alternatively building a platform structure over the top. This may in fact have been a better option as landing on the forward deck left little room for error.

To allow the helicopters to work in close to the ship, much of CANBERRA's rigging and medium frequency radio aerials had to be removed, and improvised aerials were erected which appeared to be of two types, including military band communications.
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April, 1983

THE NAVY

Page Six

USS “DEWEY”, DD349, a unit of the “Farragut” class, showing early wartime modifications. Note 3 guns have been landed, and extra close range weapons added. Photo taken 1st December, 1942.

Between the years 1922 and 1932 there was a complete lack of destroyers built in the United States due to the large number of “four pipers” still on hand. When new construction eventually got underway again with the “Farragut” class, an entirely new type of ship appeared in the fleet.

The “Farragut”s were the first of a large group of destroyers featuring many common features. Basically, the new type was a ship with a length of 341 feet and a displacement of 1500 tons.

They are quite often referred to as “1500 tonners”. A raised forecastle was re introduced and the main armament consisted of five 5”/38 cal dual purpose guns. Two funnels were fitted, the resulting appearance not being unlike the standard British destroyers of that time. The 5 inch 38 cal gun was an extremely well designed piece of equipment, able to reach over 18,000 yards at 45° elevation.

In the “Farragut” class these guns were carried in a dual purpose mounting. Only the two forward guns were given shields, all others were in open mountings. The armament layout was conventional for the time, with super imposed guns both fore and aft with the fifth gun sited abaft the after funnel. As far as machinery was concerned the new class was driven by twin screws developing 42,000 SHP and could attain the designed 36½ knots without any trouble.

Six hundred tons of oil fuel carried gave them a range of 6000 miles at 15 knots. It should be remembered that American destroyers were designed for Pacific operations, where long range was essential. As far as British ships were concerned, they were designed with an eye on North Sea work, the ships being able to be manned by home bases. Under these conditions a large stowage of fuel was not required, and the weight saved could be used for other purposes. As far as the US Navy was concerned, destroyers were gun and torpedo ships, and in the case of the “Farragut”, her eight 21 inch torpedo tubes were carried in two quadruple revolving mountings. Close range AA armament was very light, and...
amounted to four only 0.5 inch machine guns. Perhaps the high angle capability of the 5 inch 38 lulled them into a false sense of security in this area. During the Second World War there was a large increase in close range weapons, resulting in the removal of the five inch gun behind the funnel, and its replacement by 40mm equipment. By the end of the war the standard armament for the “1500 tonners” was four 5”/38s, four 40mm in two twin mountings, seven 20mm Oerlikons, and eight torpedo tubes. One feature introduced with the class was the deck house over the machinery spaces, normally referred to as the “boiler casing”, on which the funnels were mounted. This feature is still in American destroyers.

At the same time as the “1500 tonners” were being built, a new type, or classification, of destroyer was introduced. This was the destroyer- leader, got under way with the “PORTER” class. Super destroyers were being built by a number of the naval powers, and under the influence of the large Japanese “FUBUKIs”, the US Navy followed suit.

In the leaders, low angle main armament was adopted, comprising eight 5”/38s in four twin gun houses. The reversion to low angle armament seemed right at the time, but war experience was to see a considerable change of armament in this type. As built the “PORTERs” had a greater top hamper and much of this was reduced. The bridge was lowered one deck, “B” turret was removed and replaced by a twin 40mm mount, X turret was replaced by a single DP 5”/38, the after director tower was removed, the tripod fore mast was replaced by a pole mast, and the main mast was removed altogether. As built, the “PORTERs” were of similar conception to the British “Tribal” class, with the exception that the “PORTERs” had an extra four feet in overall length, an extra 6000 shaft horsepower, a slightly better oil fuel stowage (and consequently range), and an extra four torpedo tubes. The “PORTERs” were quite often referred to as “1850 tonners”.

Using the “FARRAGUT” class as the model, succeeding types incorporated improvements gained by experience, and many novel ideas were tried out. In the “MAHAN” class an extra quad torpedo tube mounting was worked in, and in the “GRIDLEY’s” no less than sixteen tubes were carried. Here again the influence of the heavy torpedo armament of the Japanese destroyers could be seen. The “GRIDLEY’s” retained the same hull form, but carried only four five inch guns, and only one funnel. They were also given 50,000 SHP, making them exceedingly fast ships. Under light conditions they were capable of 39 knots.
and, even under full load conditions could be held, but with only 475 tons of oil fuel
in the earlier units of the war built
1620 tons displacement, and 2475 tons at
in the “SIMS” class, which had risen to
up to sixteen 40mm barrels.

The “SAMPSONS” carried their lubes in
plus either nine or twelve torpedo tubes.

As with the preceding classes, wartime
modifications saw an increase in close
air conditioning became standard. With
the “BRISTOLs” (first group) and
after the war in Europe had got into full
the armament of all four groups had
standardised to four 5”/38s, five torpedo
other navies, where they soldiered on for
many years, many seeing over thirty years
of service. Numerous ships could still
make their 37 knots (under light
conditions of course) right to the end of
their days.

In summing up, the whole series of
“between the wars” destroyers with
the “BENSON” variants were sold. The
post Great War destroyer
largest of the post Great War destroyer
series, no less than 72 of the
in this period, no less than 72 of the
incident that influenced the Admiralty to
revert again to the flush deck design.

To gauge the numbers of ships involved in
this period, no less than 72 of the
“BRISTOL” class, the second
largest of the post Great War destroyer
types. Only the “FLETCHER” class,
with 113 ships completed could match
this number. Neither class approached the
famous old flush decked “four piper”,
which amounted to over 180 units, but
then again, they were more efficient ships.

USS “BENSON”, DD421, 18th March, 1944, showing the general layout of the two-funnelled US destroyers. In this ship a light tripod main mast has been fitted. clusters of 20mm Oerlikons can be seen abaft the after funnel, with twin 40mm’s sided by the main mast, bellows extend to the main mast.

USS “SOMERS” DD386, “SOMERS” class. Appearance as at 28th April, 1944, showing the large uptakes required in conusent three boilers to a single
funnel.

THE NAVY April, 1983
Page Eleven

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April, 1983 THE NAVY Page Eleven

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April, 1983 THE NAVY Page Eleven
Dear Sir,

The Editor,

16th January, 1983

Dear Sir,

Re the article: "FALKLANDS AND THE INVINCIBLE - 1914" in the January, 1983 issue of "THE NAVY"

Very few Australians know that Admiral Sir John Fisher, KCB, CB, RN, who commanded the British Mediterranean Fleet at the Falklands on December 8, 1914, was a graduate of the first Naval Staff College.

Yours faithfully,

R.S. VEALF,
Commander RANR, Retired.

17th February, 1983

Dear Sir,

Re the article: "FALKLANDS AND THE INVINCIBLE - 1914" in the January, 1983 issue of "THE NAVY"

I look forward to the day when I can "do my bit" in the Service for which I have much regard.

Yours sincerely,

ROWAN PARTRIDGE.

16th January, 1983

THE NAVY

DEE WHY, 2099, NSW

Dear Sir,

Most serving and retired officers of the Naval Services will endorse the views expressed in Commander Geof Evans' article on page 29 of Admiral Sir Wm James's book "THE EYES OF THE NAVY - 1972-1982" recondensed into "THE NAVY".

Yours faithfully,

R.S. VEALF,
Commander RANR, Retired.

17th February, 1983

Dee Why, 2099, NSW

Dear Sir,

I wish to express my satisfaction upon reading in the January, 1983 issue that a Reserve establishment is to be opened at Darwin. It represents a realisation in naval circles of the practical importance of developing a cadre of northerners in the RAN Reserve.

I had expressed my concern in a previous issue that no such establishment had been formed in Cairns. The creation of a Darwin division renews my confidence that yet more such offshoots will take root in the northern parts of Australia where they are both desired and needed.

I look forward to the day when I can "do my bit" in the Service for which I have much regard.

Yours sincerely,

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THE NAVY

PO Box 653,

DEE WHY, 2099, NSW

Dear Sir,

I wish to express my satisfaction upon reading in the January, 1983 issue that a Reserve establishment is to be opened at Darwin. It represents a realisation in naval circles of the practical importance of developing a cadre of northerners in the RAN Reserve.

I had expressed my concern in a previous issue that no such establishment had been formed in Cairns. The creation of a Darwin division renews my confidence that yet more such offshoots will take root in the northern parts of Australia where they are both desired and needed.

I look forward to the day when I can "do my bit" in the Service for which I have much regard.

Yours sincerely,

ROWAN PARTRIDGE.
LAUNCHING OF HMAS CESSNOCK

Lady McNamara, wife of the Chief of Defence Force Staff, Air Chief Marshal Sir Neville McNamara, launched the RAN's newest patrol boat, HMAS CESSNOCK, at Cairns, Queensland on Tuesday, 15th January, 1983.

HMAS CESSNOCK is the eighth of 15 Fremantle class patrol boats being built for the RAN. The lead ship, HMAS FREMANTLE, was built in Britain, and North Queensland Engineers and Agents Pty Ltd of Cairns, the other 14.

The Mayor of the City of Greater Cessnock, NSW, Alderman E. J. Fitzgibbon, also attended the launching ceremony.

The original HMAS CESSNOCK was a corvette built by Cockatoo Docks and Engineering Company, Sydney, in 1942, and served in the Mediterranean area and Indian and Pacific Oceans during World War II. The new HMAS CESSNOCK will be 42 metres long, displace 200 tonnes, and have a complement of 22. It will be armed with an updated Bofors 40mm gun and have a top speed of about 30 knots. HMAS CESSNOCK will have a gauging range of more than 3000 nautical miles, making it ideal for surveillance tasks around the Australian coast. The Commanding Officer is Lieutenant M. J. Taylor of Darwin.

US NAVY BATTLE GROUP VISITS WA

A United States Navy carrier battle group, USS ENTERPRISE, visited ports in Western Australia in late January, 1983. The battle group comprised ten ships and more than 6000 personnel.

The United States Navy nuclear-powered guided-missile cruiser USS BAINBRIDGE visited HMAS Stirling, in company with the nuclear-powered submarine USS LOS ANGELES, from 20th-30th January. This was the USS BAINBRIDGE's second visit to the Western Australian naval base for rest and recreational purposes. The first visit was in 1979. (Photo — LSPH Steve Given, RAN)

Besides the USS ENTERPRISE, the battle group included the nuclear-powered cruiser, USS BAINBRIDGE. A nuclear powered attack submarine USS LOS ANGELES also visited HMAS STIRLING at the same time as the battle group.

Prior to the visit, ships of the battle group took part in Exercise Beachcomber, off the West Australian coast. Australian Defence Force participation in the exercise, held on 18th and 19th January, included one P3C Orion aircraft and the activation of the Lancelet air to ground weapons range.

USS ENTERPRISE and USS BAINBRIDGE were the first nuclear-powered surface warships to visit Australia since the announced changes to the conditions of entry for such visits in December last year. It was emphasised that visits by nuclear powered warships would continue to take place in accordance with the very high safety standards which had always applied.

AUSTRALIAN DEFENCE FORCE EMPLOYMENT STATISTICS NOVEMBER, 1982

The total strength of the Permanent Defence Force was 72,965 at the end of November, 1982, compared with 73,083 at the end of December, 1982. The Minister for Defence, Mr Ian Sinclair, paid tribute to the ship's builders, Todd Pacific Corporation, for meeting scheduled delivery and commissioning dates, despite a severe fire in the ship last January.

The commissioning ceremony was attended by the Lord Mayor of Sydney, Alderman Doug Sherratt; the foundation President of the HMAS Sydney Association, Mr Douglas Price, and a former crew member of the second HMAS SYDNEY, Lieutenant Commander Jim Simpson, RANVR Retired, who served in the ship in the Mediterranean in 1940.

Following its commissioning the ship will carry out crew training and extensive equipment-proving trials off the US west coast. The ship would then return to the builder's yard in Seattle for 17 weeks during which time additional equipment required
The Royal Australian Navy ordered ten Mk 50 Sea Kings in 1983 designed to carry the Fleet to a high peak of operational readiness in preparation for major joint exercises later on.

The activity was the first in the series of exercises throughout the Royal Australian Navy.

The ships' companies and aircrew were integrated into a fully armed task force with the Royal Canadian Navy to carry out major joint exercises. The helicopters will operate at an all-up weight of 21,000 lb and are powered by two Rolls-Royce Gnome H1400-1 engines.

Mr Sinclair also reported that investigations into the fire in HMAS SYDNEY had been received from the United States Navy and the FBI. An independent investigation had also been carried out for the RAN by a board of inquiry. No evidence was found to support the claim by the Commonwealth for the reimbursement of the cost of repair.

The exercises began with the departure from Sydney of a ship's company on Monday, 7th February, and apart from normal complement they included 80 midshipmen under training. Climax of the training period was the impressive Fleet entry into Sydney between 11.00 and 12.00 on Friday, 13th February.

The helicopters will be constructed by Ramsey Fibreglass Australia, a division of Carrington Shipways Pty Ltd. The selection of the Newcastle firm followed a review by the Department of Defence of competing proposals for the supply of these GRP vessels from Australian companies. A decision to proceed with production vessels would be dependent on continuing results following an extensive trials and evaluation programme during which design effectiveness and capabilities of the prototype vessels would be determined.

The design has been developed by the Naval Design Branch of the Department of Defence. It is a unique design and has set a new approach in world minehunter concepts. The structure has been refined by computer and field analysis, with assistance from both commercial and government research bodies. When built, the minehunter catamaran will have an approximate overall length of 30 metres, a beam of nine metres and a displacement of 170 tonnes.

The final number of ships to be built has not yet been determined. However, if further orders are placed the RAN expects to acquire improved facilities at a number of Australian ports to support the ships. These will include more storage facilities, crew accommodation and maintenance facilities.

**NEW MINE WARFARE SHIPS**

The announcement has been made of a $231 million contract awarded to Carrington Shipways Pty Ltd, Tomago, NSW, for the construction of two prototypes of this new class for the Royal Australian Navy.

The vessels will be constructed by Ramsey Fibreglass Australia, a division of Carrington Shipways Pty Ltd.

The Royal Australian Navy ordered ten Mk 50 Sea Kings in 1983 and the two Mk 50A helicopters have been equipped to the same specification, to operate primarily in the anti-submarine warfare role. Other roles include search and rescue, tactical transport, vertical replenishment and internal-external freight carrying. The helicopters will operate at an all-up weight of 21,000 lb and are powered by two Rolls-Royce Gnome H1400-1 engines.

**HOLAND I (Photo — Navy News)**

After almost 70 years in a watery grave, Holland I, the Royal Navy’s first submarine has been raised and docked at Devonport Dockyard, Plymouth.

The 100 tonne craft was towed under water to Plymouth Sound by the salvage vessel Pinnail and later on the surface to the dockyard.

Work began immediately on the preservation of the hull. Watertight cladding off marine growth from inside and outside. Following the preservation work, Holland I will be cut into three sections for transportation to her final resting place, the Royal Navy Submarine Museum at Gosport.

Holland I was launched at Vickers, Sons and Maxim shipyard in north-west England on October 3, 1901. She was crewed by two officers and six ratings but often carried one or two more ratings for training.

**RAN RECEIVES MORE SEA KINGS**

The first of two additional Sea Kings. (Photo — Westland)

The first of two Mk 50A Westland Sea King helicopters for the Royal Australian Navy was delivered on 26th January, 1983.

The aircraft is to be shipped to Australia at the end of February, and the second aircraft, which is due for delivery on 16th March, will follow at the end of April.

The two helicopters, which were ordered in September, 1980, will join the Royal Australian Navy Air Station at Nowra, NSW, to supplement the Sea King helicopters already in operation with RAN Air Squadron HS817.

The Royal Australian Navy ordered ten Mk 50 Sea Kings in 1983 and the two Mk 50A helicopters have been equipped to the same specification, to operate primarily in the anti-submarine warfare role. Other roles include search and rescue, tactical transport, vertical replenishment and internal-external freight carrying. The helicopters will operate at an all-up weight of 21,000 lb and are powered by two Rolls-Royce Gnome H1400-1 engines.

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(THE NAVY APRIL 1983)

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Andrea Doria, launched in 1885, was the third and final vessel of the Italian Ruggiero di Lauria class. The ships were a compromise (in an age of compromises) because the then Italian Minister of Marine favoured 8,000-10,000 ton battleships against the larger vessels. Despite her small size, 11,027 tons, full load, ANDREA DORIA carried a main armament of 4 x 17in guns. Despite hope for the design, this vessel and her two sisters had a very short active life. In fact, she was already obsolete when she entered service. ANDREA DORIA spent most of her life as a floating battery GRI04 at Brindisi until after WWI when she was relegated to the role of a land battery until broken up in 1929.

Boston was the second of the two-ship Atlanta class of American cruisers. Launched in 1884, she was much too slow to be effective as a cruiser, probably because American naval thinking at the time was still chained to the coast-defence monitor. Boston ended her active career in 1911 when she became a training ship for the Oregon Naval Militia. She was receiving ship at Yerba Buena from 1918 to 1919 when she was scuttled. Her name was changed to Despatch in August, 1940 to release the name for a new vessel.

Dupoy de Lome, a most interesting looking vessel, was a single-ship and quite different from earlier French cruisers. Launched in 1890, she was heavily armoured and was the first French armoured cruiser to have the "plough" bow, not to be confused with a ram bow. Like many French vessels she was years being completed and when commissioned in 1895 was already obsolete. She was sold to Peru in 1912 but was never delivered. In 1926 she was sold to Belgium and converted to the cargo s/s Peruver.
Over the past year there has been a literal flood of books published dealing with various aspects of Australian Naval and Maritime history.

Some of these books have been of dubious quality whilst others have been absolutely gems. The two books by Peter Plowman must be considered as gems; not only are they well researched and well written but they cover an aspect of Australia's naval and maritime history which has been sorely neglected.

In writing the story of Passenger Ships of Australia and New Zealand Mr Plowman has also given us an insight into the invaluable service rendered by the Merchant marine to our nation and our Allies during the two world wars. Not only is the war service of requisitioned vessels described but also the service of the vessels which remained in trade and helped to maintain the flow of men and supplies to the front lines and sustain the war effort of this nation.

The layout of these books is both simple and functional, with ships being listed in the chronological sequence in which they entered service. For easy reference all photographs have been placed on the right-hand page with text on the left. Unfortunately this arrangement does create some problems, as it requires more photographs to fill in the blank spaces, than have been used.

The use of the flysheets to illustrate the house flags as well as the hull and funnel markings of the various companies must be condemned.

Overall these two excellent books by Mr Plowman are easy to read and use. Both must be considered as valuable additions to any naval library.

**"Warships and Navies of the World — 1880"**

By: J.W. KING

Published by Conway Maritime Press

Review Copy from Princeton Books Pty Ltd

Reviewed by: "Gdaydahu"

"Back in 1880, long before naval historians had ever heard of Fred T. Jane, J.W. King, USN, prepared a most comprehensive guide to the naval powers of the early 1880s. The result of his work may be seen in the reprint of this classic, courtesy of Conway Maritime Press.

The book spans a total of 617 pages and measures 9 3/4" by 6. The major, and many minor, battleships and warships are covered in detail,

Within each section lengthy descriptions of the ships and ships made up in World War One are presented followed by special chapters devoted to Naval Artillery, engines, boilers, torpedo warfare and armoured ships.

As a concise history of each ship is provided, the reader gains a very good insight into this much forgotten, but important part of our country's development. The research that has gone into the book has ensured a factual account, that can be useful to historians and enthusiasts.

The use of the flysheets to illustrate the battlecruiser "AMERICAN" is provided at the end of the book.

Two companion volumes, Land Forces and Aircraft are also available. Highly recommended.

---

**Battle for the Falklands — Naval Forces**

Test by ADRIEN ENGLISH with photographs by P.E. TITS

Published by Osprey

Review Copy from Princeton Books Pty Ltd

Reviewed by: Ros Gillett

"Not long after the successful operations of British naval, air and land forces to retake the Falkland Islands, a series of compact 40 page booklets have appeared on the market describing the major incidents of the campaign.

The naval version of this series is a profusely illustrated account, commencing with a brief introduction, details of the Argentine invasion and comparison of the opposing forces. Like all the series it is written in an easy style, accompanied by very clear black and white and colour photographs, and line drawings, including the losses incurred.

Technical data for all warships involved is provided at the end of the book.

Two companion volumes, Land Forces and Air Forces are also available. Highly recommended.

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**Australia's Colonial Navies**

By ROSS GILLETT

Published by The Naval Historical Society of Australia

Price: $6.00

Reviewed by: Harry Adlam

"The Colonial era remains a very interesting period. This is even more so when reflecting on the naval aspect of the time.

Occasionally a story about some colonial naval incident appears in the press as an historical feature, but by and large, the subject is largely neglected.

In this, the latest book published by The Naval Historical Society, all the various State naval forces are illustrated, indicating, under the one cover. Many previously un-published photographs are used to illustrate the various types of ships used during the period, and a wealth of detail about how they were employed.

As a concise history of each ship is provided, the reader gains a very good insight into this much forgotten, but important period. This is even more so when reflecting on the naval aspect of the time.

In the sea, the history of each ship is given with particular emphasis on their war record. The success and failures are recorded in detail.

The Colonial era remains a very interesting period. This is even more so when reflecting on the naval aspect of the time.

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**Battleships of the Grand Fleet**

By R. A. BURT and W. P. TROTTER

Published by Arms and Armour Press

Review Copy from Thomas C. Loehian Pty Ltd, Melbourne

Reviewed by: "The Dustman"

"The one disappointing feature of this book is that only the " dreadnoughts" are included. By the title I would have expected that the pre-
dreadnoughts would also have raised a mention, as they were certainly battleships of the Grand Fleet.

But if the pre-dreadnoughts are missed, the more modern battleships are not. Each class is well covered with a data table and a series of photographs of the ships, indicating, under the one cover. Many previously un-published photographs are used to illustrate the various types of ships used during the period, and a wealth of detail about how they were employed.

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INTRODUCTION

Among the many misunderstandings about the Australian Defence Force which exist in this country today, its role in peacetime is arguably the most widely held. Within the constraints of finance, manpower, and time placed upon it by the Government of the day, the ADF must promote its image so as to inform the Australian public of its activities, its relevance to our society, and of the ordinary Australian men and women who comprise its fighting services.

Defence at present is very much in the public eye. This has not always been so but just now the Falklands crisis in the South Atlantic has brought to our attention just how important it is to be properly able to defend one's country against aggression. There has been much debate in the media and the Parliament about the need for various items of Defence equipment, notably the landing craft for and against HMS Invincible. Whatever the outcome in terms of actual items, or Government perceptions of Force structures, this debate has brought Defence to the fore. People are now more aware of individual units of our ADF than they were twelve months ago, and in this context the role of the Navy in coastal surveillance is particularly relevant.

For many Australians, the surveillance of our huge coastline against incursion by intruders is taken for granted. Often the problem is believed to be the sole responsibility of Defence, and many discussions can be heard about requirements for a 'coastguard'. Such opinion highlights the ignorance which commonly abounds concerning this vital task. Before I can begin to explain just how the Navy fits into the surveillance scenario it may be beneficial to show just how coastal surveillance in Australia is actually achieved.

Responsibility for management and co-ordination of surveillance is shouldered by the Department of Transport and Construction, operating mostly from Canberra, but the effectiveness of the organisation depends greatly upon close co-operation from several other departments and bureaus. The Department of Primary Industry needs information on the activities of fishermen, both Australian and foreign, and assists to this end; the Department of Health is interested in preventing the introduction of diseases into Australia and therefore promotes health and quarantine patrols; the Department of Immigration and Ethnic Affairs is concerned with illegal immigrants; and the Bureau of Customs has a duty to prevent smuggling. All of these Departments work closely together towards the common surveillance aim and rely greatly upon the Defence Force for assistance in its achievement.

Striving towards the objective of providing maximum practical effectiveness as reasonable cost the surveillance programme promoted by Transport and Construction incorporates the following activities:

Daily air searches by chartered civil aircraft; regular air searches by RAAF P3 Orion and Navy Tracker aircraft; constant sea patrols by RAN patrol boats; and weekly on cost launches and Nomad aircraft to combat smuggling.

All of these searches and patrols combine to cover an enormous area of sea and land around Australia's huge coastline but as will be readily imagined, little could be achieved without proper co-ordination.

It is in good having intensive cover of the sea areas off Broome in WA and the major threats in from illegal Taiwanese fishermen in North Queensland. Proper planning and co-ordination of all our surveillance activities is achieved through a body known as the Australian Coastal Surveillance Organisation (ACSO). The ACSO is located in Canberra and is the nerve centre of all coastal surveillance operations; ACSO officers are mostly experienced ex-Navy or ex-RAAF personnel who control search and rescue and all general maritime incidents in addition to surveillance.

The Centre receives reports from all primary surveillance vehicles and also receives information from many other sources. Relevant data is quickly passed on to the appropriate department and if any follow-up action is required the Duty Senior Co-ordinator at the Centre advises
and the Queensland area; the degree of the north and north-west of Australia, of the Bass Strait for oil rig protection, and endurance and sea-keeping qualities, and both Classes patrolling the inshore areas.

The Cairns Attack Class boat HMAS Barracuda will be replaced by two Fremantles in 1984 thus making four boats available from North Queensland surveillance while the number of boats in Bass Strait, Defence Department studies into the overall number of patrol boats required in the 1990s are now underway and these examine the needs of south-west and north-west Australia in some detail. At present only one boat is deployed to Western Australia and she is primarily attached to the RAN Reserve Division in Perth.

Navy taking responds to requests from the ACSSO, but also takes cognisance of requests from other departments. Our ships, embark, officers from Quaranrine and Immigration to conduct investigations of outlying islands or coastal waters, and assist Customs launches and aircraft in co-ordinated responses to smuggling. The most published activity relates to fishery protection and in this area the boats in Cairns reap the line's share. To give some idea of the extent to which the Navy is involved in protecting our coastline the following are figures for 1981/82. Cairns boats spent 599 patrol days at sea and achieved 97,000 miles in the period. They were involved in 13 fishery protection incidents which led to arrests or legal action and they rendered SAR assistance on 14 occasions. If you multiply those figures by the number of boats in other havens you can easily see just how much time and effort the Navy puts into surveillance duties, and gauge how effective they are.

Surveillance duties place unique responsibilities upon the officers and men in the ships involved, and have particular importance for commanding officers: it is their task to ensure that their ships are involved in the right surveillance areas so that it can make mistakes and sometimes they don't. Our current efforts in terms of platform, manpower, and time are well worthwhile. Among the most beneficial aspects of surveillance for the Navy is the degree to which our ships, aircraft and men are seen by the community to be participating. True, our spectacular successes are few but that doesn't matter. It is the routine and endless activities that count.

Any examination of the Navy shows that its professionalism in the routine leads the way to success in the spectacular, and in this regard the banner headlines about the latest fishing boat arrests have their background in those 599 patrol days at sea that were mentioned earlier.

The Navy and the Defence Force play an effective and important part in the coastal surveillance of Australia.

**SUMMARY**

In this article I have tried to give the reader a comprehensive picture of coastal surveillance. The Defence Force sees its surveillance activities as an important proactive contribution to an essential national task. Our current efforts in terms of platforms, manpower, and time are well worthwhile. Among the most beneficial aspects of surveillance for the Navy is the degree to which our ships, aircraft and men are seen by the community to be participating. True, our spectacular successes are few but that doesn't matter. It is the routine and endless activities that count.

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In recent years the gun, as a ship's main armament, has been relegated in favour of missiles to the point where we now find that many Royal Navy frigates mount only two 40 mm Bofors, their anti-submarine and aircraft missiles forming the main armament.

From this it would appear that the gun was now considered a minor weapon. However, the recent events in the Falkland Islands have given the distinct impression that there is still a place for the gun. Even though the Royal Navy task force was primarily armed with missile equipment, shore bombardment by the conventional gun was used to good effect. The ship conducting a shore bombardment is required to reduce speed for accurate shooting, and in many cases comes to a complete stop. In the conflict of the Falklands, where the heaviest gun carried by the task force appears to have been the old reliable 4.5" QF, the ships would have been at a disadvantage had the old conventional 6 inch or 9.2 inch coast defence batteries existed to return their fire. The 4.5" would have been out-ranged, making a shore "softening-up" practically impossible.

In the serious matter of AA defence, much faith has been placed in a surface to air missiles (SAM) to counter an air attack. The loss of four major warships is a clear indication that ships can no longer completely defend themselves against a well pressed air strike. On the defensive side, the AA gun as a ship's main armament fulfills a number of important roles. The first is to shoot down enemy aircraft or at least keep them out of effective range. Secondly, as a morale booster the gun gives a sense of protection. It is better to shoot back with anything at all rather than just sit there and watch. Although modern missiles travel at very high speeds, there remains a chance of exploding or deflecting them from their course.

When the Second World War commenced, most ships were woefully short of AA armament. Much faith had been placed on the 0.5 inch four barrel quad Vickers and the 2 pounder pom pom. Most major warships carried this type of armament in some form or other. For longer range work, the excellent 4 inch Mark XVI gun, in either single or twin mounts was entering service. The Mark XVI was probably the best all round gun in the Royal Navy then, and for some years to come. But in the close range department, the 0.5 inch quad was just not good enough, and had been replaced by the 20 mm Oerlikon in most ships by 1942. Although a good weapon in a general respect, the pom pom suffered from a low muzzle velocity and a small explosive shell.

Later in the war the 40 mm Bofors came into its own as one of the great guns of all times, and indeed it still is in service. Rapid firing weapons such as the twin Bofors, or for that matter the quad 2 pounder pom pom, firing in the path of an incoming missile may be able to stop the weapon and even destroy it. The main purpose of the multi-barrel pom pom was to kill the sky around the target with exploding shells, an operation that the old gun can still carry out.

As a weapon in attack, the gun has still much in its favour. Large quantities of ammunition can be carried, as against the rather low number of missiles reported to be stowed in ships of the present day. And in the case where a ship finds itself up against more than one enemy ship, the gun can be a deciding factor. It would appear that the lessons learned in the Pacific, and indeed all other theatres in WW2 have been forgotten. Air superiority was then essential. It would appear that this condition still applies. Air control and a good AA defence were the mainstays of the war at sea, but today it appears that this is no longer the case.

It is this writer's conviction that the gun will again take its place as the main armament of ships. Technology in the field has placed many effective long range weapons on the market, and with the modern gunnery control systems available, ships can be well outfitted. To my mind the gun was scrapped too quickly in favour of the missile. The gun has a place in modern warfare, as events in the South Atlantic have indicated.

"Most Soviet warships now in service are armed with a wide selection of gun calibres to meet aircraft, surface and missile threats.

**By HARRY ADLAM**
United States Navy nuclear-powered submarines have now been visiting the Royal Australian Navy’s support facility HMAS Stirling with monotonous regularity for a number of years.

Situated on Garden Island in Cockburn Sound, Western Australia, the base is a very popular rest and recreation port for the "Yankee" submariners. Since mid-1980 Rockingham photographer Norm Dellow has been "shooting" all the visiting United States submarines as they arrive at the base.

Modern day submarines are certainly not things of great beauty, yet Norm consistently comes up with new angles and continually produces excellent photographs of these vision, be it in colour or black and white.

Norm first became involved with visiting submarines when he began taking newspaper photographs for the local newspaper, "The Sound Advertiser". He admits that "since then they have become quite an interest" to him.

The sale of photographs of the submarines, mainly to sailors off the vessels has become an expanding part of his business, Rockingham Photographics. Only recently he invested in new photographic equipment to bolster his range of capabilities in this field.

USS Snook was the first US nuclear-powered submarine to visit HMAS Stirling. That was way back on August 14, 1976 — two years before the base commissioned.

Since then boats of the Los Angeles, Permit and Sturgeon classes have visited the base in increasing numbers. In 1979 two US submarines visited HMAS Stirling, in 1980 — 11 and 1981 — 12. Many of these submarines have since been back for second visits.

They have also revived wartime memories with their visits to Western Australia as the Port of Fremantle was a large World War II US submarine base. Many of the present day visitors such as TAUTOG, ASPRO, FLASHER and PUFFER Carry the names of wartime submarines which operated from the same waters, some 40-odd years before.
THE cruiser Olympia floats today on the Philadelphia waterfront as the sole surviving naval relic of the Spanish-American War and of the revived American Steel Navy that marked the emergence of the United States as a world power around the turn of the 20th century.

Authorised: 1888 as cruiser number 6, the Olympia was on six years in the building. Her contract was awarded to the US Navy (Retired) JOHND ALDEN by Commander JOHN D. AULDEN US Navy (Retired)

Olympia was built to an original US design, unlike that of any other cruiser built anywhere in the world, before or since. During the nineties, the mission and characteristics of the cruiser as a warship type were undergoing rapid transition with the emergence of two main variations. The protected cruiser was a ship of moderate dimensions with large numbers of medium-calibre, rapid-fire guns usually mounted singly on the weather deck and in lower deck sponsons, and a curved protective deck of armour plate over the ship's vitals just above the weather deck. A heavier and more powerful type, the armoured cruiser, was characterised by a main battery of 8-inch or 10-inch guns, usually mounted in turrets or armoured gunhouses, a high-powered propulsion plant with three or four towering funnels, and a belt of side armour in addition to the protective deck. Although the Olympia was a protected cruiser, she incorporated some of the features of the armoured type. She had an overall length of 444 feet and a breadth of 53 feet, a normal displacement of 5,870 tons, and a mean draft of 21 feet, all of which placed her toward the upper end of the protected cruiser spectrum. Two 9,000-horsepower vertical inverted triple-expansion engines driven with steam from six Scotch boilers, four double-ended and two single-ended, gave her a top speed of 21.7 knots, which was remarkably high for that day. With a nod toward diehard tradition, she also carried a seldom-used two-masted schooner auxiliary sail rig.

Her bunkers held coal sufficient for over 8,000 miles of cruising. For armament the Olympia carried four 8-inch/35-calibre breech-loading rifles in two turrets on the main deck forward and aft, ten 5-inch/40-calibre rapid-fire guns mounted singly in four casements in a raised citadel amidships on the main deck, 14-pounder quick-firing rifles in small sponsons on the second deck and shielded open mounts in the superstructure, six 1-pounders, four Gatling machine guns in the fighting tops of her two military masts, and six 18-inch Whitehead torpedoes mounted above water. Her protective deck was 4½ inches thick on the slopes and 2 inches on the flats. This was an exceptionally heavy and well-protected battery for a protected cruiser, and one particularly designed for her intended role as flagship of the Asiatic Squadron. Her straight-sided cylindrical turrets, a legacy from the old Civil War monitors designed by John Ericsson, soon gave her a dated appearance when other ships were armed with the balanced-high-elevation turrets with the flat sloping faceplate and overhanging gun house. The Olympia carried a crew of 33 officers and 395 enlisted men, and she was fitted with commodious quarters for a flag officer and his staff. However, lest the admiral and ship's captain forget the cruiser's warlike purpose, 5-inch guns were mounted in each of her sterns.

As far as the fleet was concerned, the Olympia was a prime command, especially in the Asiatic Squadron to which she was immediately assigned. Her peaceful cruising days were soon numbered with the arrival of Commodore George Dewey. Shortly after he joined the ship, telegraphic instructions came from Assistant Secretary of the Navy Theodore Roosevelt to whip the fleet into shape for impending war with Spain. Dewey carried out his instructions with great energy and brilliance, and on May 1, 1898, led a heterogeneous column of cruisers and gunboats into Manila Bay, calmly gave Captain Charles V. Gridley the order to "fire when you are ready," and became the foremost hero of the war. Badly in need of overhaul after her Asiatic tour, the Olympia was returned to the United States for a triumphal reception followed by a general refit between
In her permanent berth at Philadelphia on October 4, 1958, after restoration. (Photo — USN)

"It is my understanding that the Department will take immediate action toward the preservation of the USS OLYMPIA as a naval relic of the Spanish-American War period.

Sincerely yours,

Franklin D. Roosevelt"

Thus was the Oregon traded for the Olympia. In many ways, it was an unfortunate transaction from the historical viewpoint because the Olympia was in poorer shape and had also been much altered from her original condition. Unfortunately, Roosevelt's understanding was not honoured by the Navy Department, future administrations, or the Congress. The Olympia continued to lie without maintenance or upkeep at the deserted end of the Philadelphia Naval Shipyard until 1954, when the Navy requested and Congress authorised the disposition of all the Navy's historical relics except the Constitution.

Those not taken over by private patriotic organisations would be summarily scrapped.

For the next three years, committees of the Cruiser Olympia Association and the Reserve group, both under the leadership of Dr. Henry D. Learned and Francis D. Pastorious laboured to raise sufficient funds to meet the Navy's requirements. Finally the Keystone Dry Dock and Ship Repair Company of Chester, Pennsylvania offered to make $168,000 worth of repairs without immediate payment, and on September 11, 1957, title to the Olympia was delivered to the Cruiser Olympia Association with Edmund A. Crenshaw, US Navy (Retired) as custodian. Unhappily, the ship was soon run into financial difficulties. The repair job was a rather slapdash affair mostly consisting of the application of paint over rusted plates and corroded machinery, and a considerable portion of the pont engine disappeared in the process. Ultimately the company went bankrupt, and its creditors sued the Olympia's owners for the unpaid repair work. Fortunately a sympathetic judge reportedly told the creditors that he would throw the Olympia into bankruptcy when he did the same for Independence Hall and forced a compromise settlement of the claims. A new Cruiser Olympia Association was formed in 1964 with Casper J. Knight Jr. as Chairman of the Board of Trustees, and the slow task of paying off debts and restoring the ship to acceptable condition was started. Although the Olympia has now been declared a National Historical Monument, no government funds have been provided to assist in her preservation after her disposal by the Navy.

Over the years, devoted workers, mostly volunteers, have gradually restored sections of the cruiser to something of their original condition. Sea Explorer classes of Philadelphia's private high schools, and naval history buffs have all done their bit. Machinery manufacturers, clubs, and individual philanthropists have underwritten the restoration of specific compartments. A former pantry has been fitted with modern communication equipment as a civil defence mobilisation station, while the old warrant officers' wardroom has been furnished for special group meetings. To a visitor who had first seen the Olympia as an unwanted Navy derelict in 1949, and later in the early stages of her rehabilitation under private hands, the progress seemed remarkable. The flag officer's quarters and much of the wardroom country have been largely restored, and their hand-fitted woodworking uncovered from multiple layers of paint. A number of the original furnishings have been recovered, repaired, and reinstated. On a recent weekend, a dozen or more volunteers were cheerfully working away while manager Joseph Gladen and the ship's permanent staff of four oversaw the activities of the visitors who trooped through the open areas, down into the scoreboard engine room, and around the topsides. One enthusiast was lovingly bemoaning the blemish of a 5-inch gun, another was searching the rust of the 13-inch gun for evidence of the ship's ancient ice-making plant, and a couple of Sea Explorers were disassembling and cleaning an 8-pounder. Below decks, in areas still closed to visitors, teams chipped away at the rust in compartments that had been unused for 45 years, traced and repaired electrical circuits, and tinkered with fascinating machinery from a bygone age.

Although much progress has been made, far more remains to be done to reclaim this fine ship from the ravages of decades of Navy neglect. Her 87-year-old steel hull, although never drydocked within the memory of its present custodians, is as tight as a drum and seemingly immune to the corrosive power of Delaware River. The rust is currently removed by the Navy during World War I have been replaced by remarkably genuine-looking facsimiles made of sheet metal and pipe. Until recently, the weather decks, which the Navy had covered with a layer of cement after the original teak planks began to rot and shrink, were a major source of leakage during rainstorms, but these have now been overlaid with a multi-layered water-proof composition. Since leaving the naval shipyard, the ship has been shifted to different piers, none very satisfactory. A particularly unfortunate consequence of its last location alongside Pier 11, almost directly under the Benjamin Franklin Bridge, was a heavy depositing of blue paint which the bridge was given a bi-centennial coat. According to the Olympia's caretakers, the blue paint could be removed from the new composition deck without special treatment and they have taken steps to rectify the spotted appearance.

But, hopefully, better days lie ahead. Earlier this summer, the Olympia was moved for the last time to a fine berth in the new Penn's Landing historical area, where she has been joined by the sub-

Oregon was brought out of retirement, rearmed with 12 4-inch/40 caliber guns in place of her old mixed battery, and assigned to patrol duty off New York. In January, 1917, she hit a shoal in Long Island Sound and had to go into drydock for major repair, during which she was re-armed with her new 1-inch/51 caliber guns. After more patrol duty in the North Atlantic, she was sent in 1918 to Murmansk, Russia, as part of the Allied anti-Bolshievik intervention force. At war's end, she was shifted to the warmer waters of the Mediterranean, Adriatic, and Black Sea to stabilize the turbulent aftermath of the war in those areas. Her last major mission was to transport the remains of America's "unknown soldier" from Le Havre, France, to Arlington National Cemetery, where he was interred on November 11, 1921. After one final mid-shipmen's cruise, she was decommissioned for the last time at Philadelphia on September 1, 1922.

For the next two decades, the Olympia lay at the Philadelphia Naval Yard being slowly convoluted by moth and rust. At first, visitors were allowed to wander about her decks, and vandalism and souvenir hunting ensued. Eventually she became too decrepit and unsafe for visiting and lay forgotten at a deserted berth, ignored even by the caretakers of the mothballed reserve fleet. One by one, her contemporaries of the old White Fleet went to the graveyard until only the Oregon and the Olympia were left. The famous battlecruise Oregon had been taken in hand by her namesake state in 1925 and ensonced as a naval relic in Portland, while the Olympia remained all but abandoned. In 1931, she was reclassified as a miscellaneous relic, IX 406.

With the outbreak of World War II, obsolete warships became prime targets for the nation's scrap drives. Governor Charles A. Sprague of Oregon patriotically offered his state's battlecruise for service, but the War Production Board pressed urgently for her hull as scrap metal. President Franklin Delano Roosevelt, expression of blue paint when the bridge was given a bicentennial coat. According to the Olympia's caretakers, the blue paint could be removed from the new composition deck without special treatment and they have taken steps to rectify the spotted appearance. (Photo — USN)

The Navy

April, 1983

The Navy

April, 1983

(Pro—USN).

Oregon's

Diminutive:

Length:

Breadth:

Draft:

Displacement:

Armor:

Armament:

Breech:

Speed:

Power:

Range:

(Constitution.

(End.)

(Dewey)
Further Reflections on THE FALKLANDS AND INVINCIBLE 1914
by REV M. A. HEAD, S.J.

The recent battles around the Falkland Islands have spawned a rush of articles about the earlier battle of the Falkland Islands. Still, after all this time numerous errors continue to appear in generally competent articles.

Robert Kendall Pope’s article FALKLANDS and the INVINCIBLE 1914 (The Navy, Jan., 1983) contains a fairly representative example of the type of error being referred to: “Sturdec taking no chances, kept his dreadnoughts out of range of the enemy’s (77) smaller eight inch guns while he pounded away with his own twelve inch shells. Each time the German ships tried to narrow the gap he would simply fire away. With his superior speed and weapons, providing the weather remained clear, he knew it was only a matter of time before success was in his grasp.”

It is obvious that the INVINCIBLE and INFLEXIBLE were far too strong for the SCHARNHORST and GNEISENAU. In practice they were six knots faster, far better protected, and each main armament fired a greater weight of metal that a whole broadside of the German ships. However, staying out of range was another matter.

The main armament of the British INVINCIBLE and INFLEXIBLE was eight 12”/45 cal Mark X guns which in mountings capable of 33° degree elevation and using the 2 cwt shells on issue in 1914 gave a range of 16,350 yards. The 8.2” guns carried in the turrets of the German armoured cruisers had a maximum elevation of 30° which gave a range of 17,800 yards, 1,500 yards further than the British 12” of 1914. The battery mounted 8.2” guns had an elevation of only 16 degrees and the maximum range possible was considerably less, only 13,800 yards.

The British battlecruisers began firing at the Leipzig at 16,000 yards and ranged varied from there down to about 8,000 yards. However most of the action was fought as about 12,000 yards. All the maximum range of the German 9.9” secondary battery. Even so the INVINCIBLE was hit twenty-two times (12.4”, 6.5” and four unidentified) and INFLEXIBLE thirty times. The German guns, however, were not large enough to do critical damage and INFLEXIBLE had four casualties and INVINCIBLE only one.

Once the action became a simple stern chase the issue was never in doubt. As Piper points out, it was only a matter of time before the huge British ships tore the heart out of the smaller German ships. However there were a number of questions that could be asked at the time and probably weren’t. It is unknown how many shells actually hit the two German armoured cruisers, but it is thought to be about forty in each case. This means that either the German ships were well constructed and given immense internal strength or there was something wrong with the British shells. The experience of Jutland proved both of these observations were true.

The second question that should have been closely examined at the time was the appalling shooting of the British ships. INVINCIBLE fired 513 rounds of 12” ammunition and the INFLEXIBLE managed 464. To this CARNARVON added 85 7.5” and 60 6”, which totals a mere one thousand three hundred and nineteen shells. Togo’s four battleships at Tsushima fired 2,950 rounds of 12” ammunition (2,485 on the German ships). The remainder, except BRISTOL, were at two hours’ notice. At 9.15 am GNEISENAU passed close enough to PORT STANLEY to exchange fire with the CANOPUS. At this time von Spee had the opportunity to take the almighty risk of closing up to the harbour entrance where the British ships would have protected their ships from fire by the ships in the harbour. KENT, the only unit that could have got safely to sea, would have been overwhelmed, like the MARY ROSE. The only thing Sturdec had to worry about were von Spee’s guns; there were none to match the British guns, the mines, or the aircraft that were revolutionising warfare in the North Sea. Falkland Islands 1982 seems to be the start of next era.

April, 1983
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Worth doing, worth Dulux.
``D'' Class Cruisers in New Zealand

With the formation of the New Zealand Division of the Royal Navy in 1920, a light cruiser was allocated to the New Zealand Station. However, it was soon decided to make the division a two cruiser unit. The original ship sent out was HMS CHATHAM, a member of the well-known "Town" type, and generally similar to SYDNEY, MELBOURNE and BRISBANE of the RAN. In 1924 a replacement cruiser was commissioned for service on the New Zealand Station, this ship being HMS DUNEDIN, and in 1925 HMS DIOMEDE became the second ship.

The "D" Class light cruisers were built under the Emergency War Programme and were still quite modern. Because neither ship was launched until after the armistice, both had not been subjected to hard war service conditions. Very handsome ships, they had the rakish lines of a destroyer with superimposed guns fore and aft, and a trawler bow. A tripod fore mast, well raked, and two funnels of unequal size added to the general appearance. Roughly the same size as the older CHATHAM, the "D" class had many modern features not to be found in the older ship. Oil fuel only was carried, and the main armament was director controlled. Four triple 21 inch torpedo tubes were mounted on the upper deck, and the main battery of six 6 inch BL guns were all mounted on the centre line. Another worthy feature over the CHATHAM was that the pair could steam as 9 knots, in excess of four knots over the older ship. The length was much the same, as was the displacement, but they were much superior in every other way.

The general details of the "D" Class were: Length 472' 6"; Beam 45' 6"; Draught 16' 6" as full load; Displacement was 4,450 tons for DUNEDIN and 4,765 tons for DIOMEDE. Besides the six 6 inch main armament, three 4 inch AA guns, and two 2 pounder pom pon guns were carried, as well as two 303" Vickers and eight .303" Lewis guns. Six Yarrow boilers supplied steam to a two shaft turbine installation giving 40,000 shp. DIOMEDE was slightly different to her sister in that her forward gun was carried in a gun house.

In New Zealand this pair became quite popular, the part played by DIOMEDE in the Napier earthquake of 1931 is still remembered with pride.

For over ten years the "DVs" were a part of the New Zealand scene. They served the nation well in the hard times as well as the good, but by the 1930s they were beginning to show their age. Negotiations were made with the Admiralty to have the ships replaced by a more modern type. There were a few long faces when DIOMEDE was sent back to the United Kingdom in 1936 to pay off, with her crew commissioning the newer ACHILLES in March of that year. DIOMEDE returned to the UK the next year her crew commissioning LEANDER in April, 1937. Although they were popular ships, there were some undisputed facts to be faced. They were too small to carry an aircraft, a fitting regarded at the time (1936) to be essential for cruiser operations. With the exception of DIOMEDE's A gun, all the main armament was carried in open shields, and the midship 6 inch guns were awkward to keep supplied with ammunition. Although they were given trawler bows, they were still fairly "wet" ships. Obsolete they may have been, but they had helped to train the New Zealand Division to a very effective state of efficiency.

To complete the record, both ships were in constant service with the Royal Navy during WW2. DIOMEDE was struck off the list at the close of hostilities, and soon scrapped. DUNEDIN did not fare so well, being torpedoed and sunk by a U-boat at the South Atlantic on November 24, 1941.
The last few months have seen a great deal of activity at TS MILDURA, currently believed to be Australia's most inland Naval Cadet Unit.

At the end of June some fourteen (14) Cadets and three (3) Instructors accompanied by Officers and experience on the river boats and boats, undertook a survival camp at the request of the Mayor of Mildura, which was to gain experience in the Koorlong Lakes area of Sunraysia, under the command of Lieutenant H. A. Goodall, NRC, Officer Commanding TS MILDURA. The camp was to last some 18 months of hard toil clearing the Island of scrub and lantana bush.

The camp concluded with a barbecue on the Sunday afternoon.

A comprehensive programme of sailing instruction was given to all the Cadets present, including coming alongside, righting a capsized boat and racing. The camp concluded with a barbecue on the Sunday afternoon.

In the Koorlong Lakes area of Sunraysia, the Camp was to last some 18 months of hard toil clearing the Island of scrub and lantana bush.

For the first time in the Unit, several intrepid Cadets under the charge of Petty Officer Susan Miller, NRC, endeavored to find the source of the Murray River at the confluence of the Murray and Darling Rivers. The Murray River at the confluence of the Murray and Darling Rivers.

On the 1st August, Cadets commanded by Lieut H. A. Goodall, NRC, held a sailing instructional weekend camp at Lake Hawthorne which was to last some 18 months of hard toil clearing the Island of scrub and lantana bush.

A comprehensive programme of sailing instruction was given to all the Cadets present, including coming alongside, righting a capsized boat and racing.

The camp concluded with a barbecue on the Sunday afternoon.

The history of the Naval Cadets is a very long one. Its origins can be traced back to the early 1900s, when the Panamint River Naval Cadet Unit was first formed.

In 1921, a new organization of similar aims and objectives — The Navy League of Australia — was formed. The first formation was the Parramatta River Naval Cadet Unit.

The original “Drummoyne” Unit was renamed the TS SYDNEY Unit of the Australian Sea Cadet Corps.

Nineteen years later (January 1, 1973), TS SYDNEY assumed its present identity as the Naval Reserve Cadet Unit TS SYDNEY.

On May 28, 1977, the Unit officially transferred its base of operation to nearby Spectacle Island and was now directly controlled by the Royal Australian Navy. Since July 1, 1972, the TS SYDNEY Unit has been under the command of Lieutenant Commander John G. Hampson, OAM, NRC.

Girls and boys between the ages of 13 years and 18 years may seek enrollment in the Naval Reserve Cadet Unit.

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TSSYDNEY

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