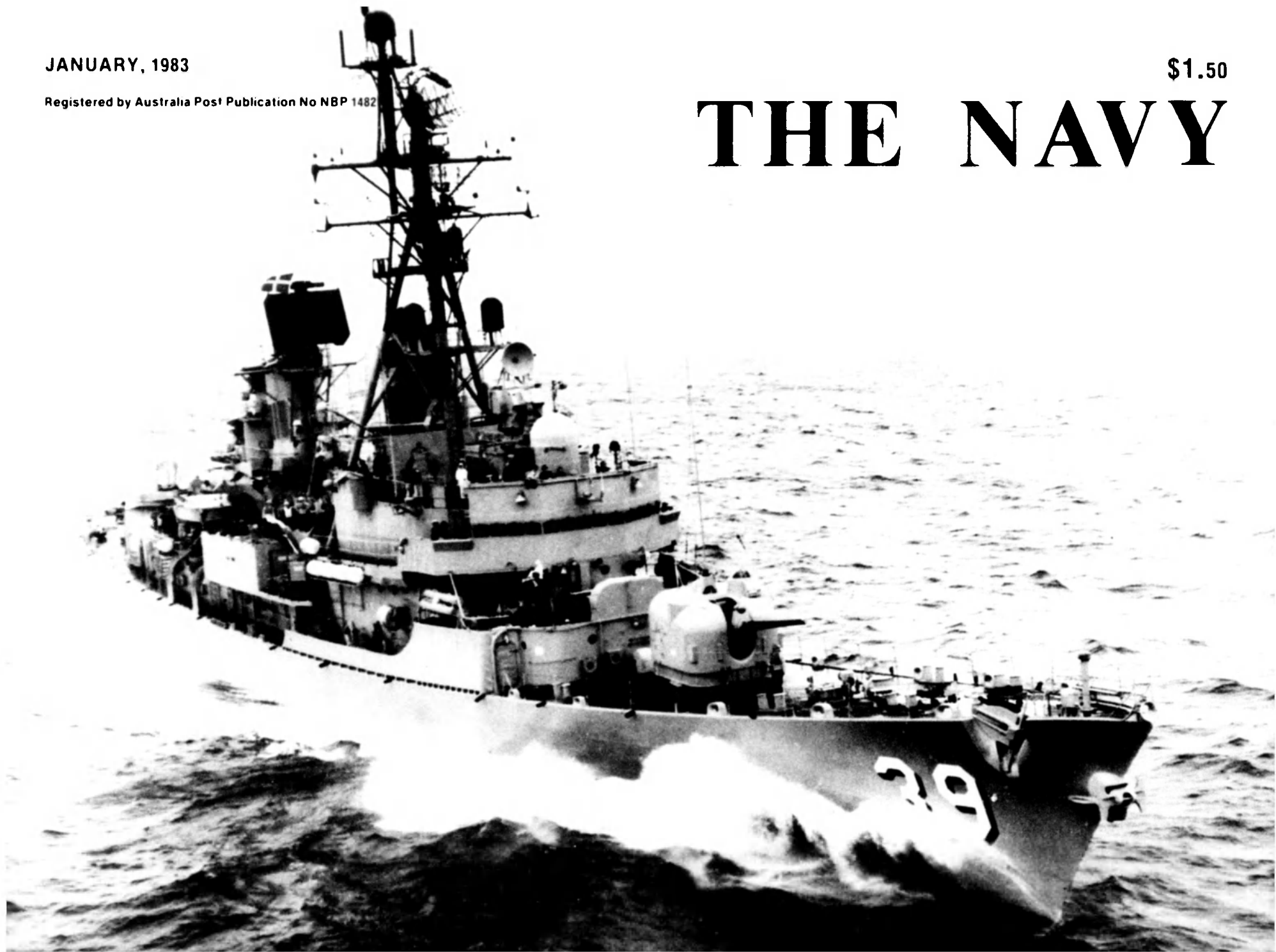


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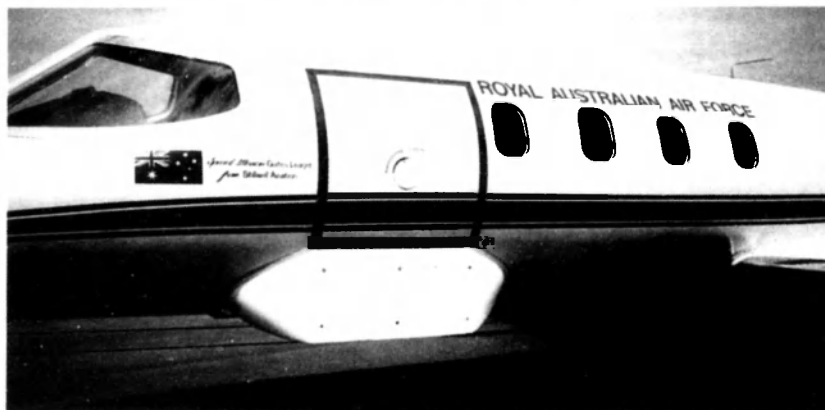
# THE NAVY



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# THE NAVY

Vol 45

JANUARY, 1983

No 1

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The magazine of the Navy League of Australia



HMAS ATTACK prepares to pass astern of the container ship ADVARA in February, 1979. (Photo — RAN)

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MELBOURNE	BRISBANE	HOBART
Greenan Publications Pty Ltd 388 Bourke Street Phone: 87 1481	3rd Floor 450 Ann Street Brisbane, 4001 Phone: 31 2531	123 Murray St Hobart, 7000 Phone: 34 4086
Printed by Maxwell Printing Co Pty Ltd (Incorporated in NSW), 842 Elizabeth Street, Waterloo, 2817. Phone: 898 2980		

## FRONT COVER

HMAS HOBART ... September, 1982  
(Photo — Command Photographic Section)

## CONTENTS

Naval Awareness Symposium .....	3
Letters to the Editor .....	13
RAN Participation in Coastal Surveillance .....	15
Maritime Concepts of Operations Related to Naval Air Power .....	19
The Carrier Switch .....	21
Editor's Comments .....	22
'Anchors Away for Reservists' .....	23
Falklands and the INVINCIBLE, 1914 .....	24
Naval Roundup .....	29
Book Reviews .....	35
Aircraft Carriers of the Mediterranean Naval Powers .....	37
Nott That Man Again .....	39
Naval Reserve Cadet News .....	40

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## Naval Awareness Symposium, 1982

### (1) OPENING ADDRESS BY

RADM A. J. ROBERTSON,  
AO, DSC, RAN(ER)

**THIS symposium has been arranged by the Navy League and the Naval Association with the objectives of generating greater community awareness of maritime considerations, and to develop a more informed appreciation of current naval philosophies.**

Why, in 1983, is such awareness considered important by these two long-established organisations?

Perhaps a starting point is that when compared with the general level of public knowledge and experience of say 30 years ago, today comparatively few people now understand maritime affairs or requirements. Thirty years ago the normal way to travel overseas was by sea, and many of our people saw the merchant ships and navies at work, visited the great seaports, and passed through the major maritime choke points of the world such as the Suez and Panama canals, or the Straits of Malacca or Sunda. In such travel they absorbed knowledge of maritime affairs and its importance to Australia. Today our travellers sit back in wide-bodied jets clutching their martinis while eyeing the hostesses. They 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, mostly those who enjoy holiday cruises, or yachtsmen, are ever exposed to sea travel. In past days also we had many thriving ports, crammed with shipping of both overseas and coastal lines. Many thousands of our citizens derived their livelihood from building, repairing, manning or servicing shipping. Today our coastal shipping has dwindled; most of our smaller ports such as Coff's Harbour, Eden, Ballina, etc. have almost died; many of our shipbuilding firms have closed down; and such developments as containerisation, bulkhandling, and automation have greatly reduced the numbers of personnel directly involved in ships or their servicing.

So today many fewer people have contact with the maritime scene or direct maritime knowledge.

Is this important, you may ask? We reply strongly in the affirmative. The enduring factors in our strategic situation remain and point strongly to the importance of our maritime environment. Except for smaller island nations there are indeed few countries in the world as dependent on control of the sea as we are in Australia. Over three-quarters of our population lives within 20km of the sea — conventional 5" gun range, let alone modern missile range — and for those thinking of an easy withdrawal beyond the black stump, our hinterland is uninviting as a retreat area. About 95% of our imports and exports still go by sea and without surety of sea passage our economy and our capacity for defence would be most seriously affected if not destroyed. Our great industries depend on sea transport around our coasts for oil from the Bass Strait (and shortly the NW Shelf); for iron ore, bauxite, coal and other raw materials. You have only to remember the effect in NSW a few months ago of, on one occasion, a strike, and another a breakdown preventing a single tanker arriving from the Bass Strait. Petrol rationing was imposed within a week to ten days. The effect in war of the loss of such a ship needs no elucidation.

And so the importance of the sea to Australia remains. But

you may again ask, why are we worried about possible loss of control of our coastal and ocean lines of communication when we have powerful allies.

When World War II finished, the American and British Fleets had swept the oceans of rival naval forces. The Allies were supreme at sea and we all came to accept that fact as a general background to our defence thinking and plans. However, slowly but surely, the strategic scene has changed.

The most obvious, but by no means the only maritime power change, has been the tremendous growth in numbers and technology of the Fleet of the Soviet Union — a nation which espouses an ideology strongly opposed to our own. From being a largely coastal Fleet which ended WW2 in poor shape and with very limited capability, the Soviet Navy has grown enormously and added a full range of vessels from SSBN's to STOVL carriers. It has moved out into the oceans — firstly the North Atlantic, then the Mediterranean, the South Atlantic, the Indian Ocean and in recent years the South China Sea, based, as many will know, on the old American base of Cam Ranh Bay in Vietnam. Other navies have also grown, including some in the Pacific and Indian Oceans. The monopoly of maritime power no longer lies with the West and the navies of our Allies are seriously stretched in meeting commitments. In the view of many observers we are now entering a series of decades when maritime power will become, once again, a dominant consideration in Defence policies of all nations who border the sea or earn their livelihood by using the oceans as a highway for their trade.

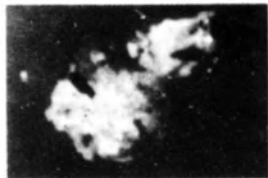
With the change in the balance of strategic maritime power, and noting that, despite our current economic problems, we are now a comparatively wealthy nation of 15 millions, it is in our national interest, and expected of us, that we should take a greater share of our own maritime defence and stand on our own feet. To many of us, common sense and National self-respect indicate that we should have maritime forces capable, as a minimum, of effective offensive and defensive operations on both our Pacific and Indian Ocean coasts at the same time. Such forces we do not yet possess.

We have of course just witnessed in the Falkland Islands a demonstration of modern maritime war — the first since WW2, and a war which holds many lessons for Australia, some of which are clear now.

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 backs up 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.

The war was a remarkable demonstration of the marshalling of all maritime resources by Britain, including, especially, merchant shipping. We saw for the first time, nuclear-powered submarines, vertical take-off aircraft, sea-skimming missiles, anti-aircraft missiles of several types, maritime helicopters, and modern warships and aircraft engaged in action in most forms of maritime warfare from blockade to amphibious assault.

Of particular relevance to Australia was of course the performance of the British submarines and the two small British aircraft carriers. These latter were designed and equipped for anti-submarine warfare in the North Atlantic but employed in a very different role: 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,



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despite this most serious military disadvantage, and with only 28 Sea Harriers between them, these two limited carriers used their mobility and modern weaponry in a highly efficient manner, and prevailed. (Sea Harriers shot down 32 enemy aircraft without loss. Many more were destroyed on the ground.)

The RAN is of course in the midst of a most serious crisis, having paid off the aged Melbourne and now lost its replacement the Invincible, no longer for sale as a result of that war. The RAN has now lost a large segment of its former reconnaissance capability; its strike power, and its air defence and anti-submarine warfare capabilities, since no ship can operate the Skyhawks, Trackers or even the ASW Sea-King helicopters of the Fleet Air Arm.

In reality the RAN is now like a man who has lost one eye and one fist.

Except when close to the few RAAF bases or in company with allied carriers, the RAN, unless the Melbourne is replaced, will be at a serious disadvantage in any future conflict and a shadow of its former power, whether as a deterrent or for independent offensive or defensive operations. With this will go some of the status and voice of Australia in maritime or military matters in our region. In certain situations, it will reflect on our international standing as a regional power, and our value as an ally.

Of course there are arguments, including financial, against replacing HMAS "Melbourne" in her ASW, strike and Air Defence roles, but the question must be faced whether the navy of an exposed, maritime nation like ours can in common sense be allowed to be so seriously depleted in its offensive power and in its capacity to defend itself. You must all have seen in your papers and on your TV screens the fearful sight of burning British warships in the Falklands—ships which were overwhelmed on those occasions when adequate air-cover could not be provided by the two hard-pressed carriers. That lesson was clear for all to see.

*Air power in modern maritime war remains of very great importance and the RAN must have it if it is to be able to perform its function.*

## (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 Naval 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 interrelated factors which require policy direction by the Government. I refer to policies such as:

- Foreign Relations
- Trade
- Energy



Fast becoming a memory—Fleet Air Arm A4 Skyhawks aboard the carrier HMAS MELBOURNE. (Photo—RAN)

- Monetary
- Immigration
- National Development

together with a national security policy or strategy.

The capabilities of the Australian Defence Force are an integral part of any national security policy—but they are not the whole by any means—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 zones.
- (b) Avoidance of global war.
- (c) Security of our overseas and coastal lines of communication; and
- (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.

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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, that is, to exploit the maritime environment to its advantage, for political, economic, scientific or military purposes; and to prevent use to our disadvantage, both in peace and war. It 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.'

The 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 scale of maritime activities is 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 some 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 defeat 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 contingencies, 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 day there are about 195 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 Hobbs observed "Covenants without swords are 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 supporting friends, by coercing enemies, by 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 — be they friendly, neutral, or hostile which our own national leadership may wish to influence.

Our Maritime Forces must therefore be structured to:

- (a) Defend our vital trade, both overseas and coastal.
- (b) Control the sea approaches to Australia; and
- (c) Contribute to deterring aggression and to maintaining stability within our region.

This requires a capability to conduct a number of offensive and defensive operations, among these are:

- Intelligence gathering.
- Surveillance and Reconnaissance.
- Strategic and tactical strike against maritime and land targets.
- Anti air warfare.
- Interdiction of enemy shipping.
- Anti submarine warfare.
- Mining.
- Mine Countermeasures.
- Amphibious operations.
- Support for land forces.

This list is not exhaustive, but if you cast your minds back to April/May of this year and to the Falkland Islands campaign you will recall that the Royal Navy conducted successfully most of them 8000 miles from home also, you will appreciate that a Navy is not limited to the provision of just these defensive and offensive capabilities. Our Force structure and equipment also provides an inherent capability to contribute to a number of national tasks including:

- Civil coastal surveillance, and fishery protection.
- Aid to the civil power.
- Assistance to the community, including search and rescue.
- Oceanography and hydrography, and last but certainly not least
- Support of foreign and defence policy, this includes defence co-operation programmes, displays and exercises with ships of other nations.

In general terms our existing naval force structure (and I include Melbourne and her aircraft in contingent reserve) meets these capability requirements I have listed, although in some areas, for example mine warfare, 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 determined pilots, on the basis of British losses in the Falklands. The old truth should not be obscured that to sail

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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 additional 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. Although missile firing patrol boats present a threat they have a number of shortcomings which make them unsuitable for offshore operations. They lack range, endurance and an organic surveillance capability. They are also very susceptible to restraints of weather and they are vulnerable to air attack. Submarines are excellent sea 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, deception, relatively low 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 when land based aircraft are unavailable. I would like to spend a few moments discussing organic naval aviation, which is at the crux of the recent debate.

### NAVAL AVIATION

Tactically, no single offensive or defensive capability can be seen in isolation. All capabilities are to some extent complementary and the need for one depends on a judgement of whether or not there is sufficient of another available, but an element of each should be available to ensure the necessary defence in depth.

Tactical air support is an important ingredient of this mix of capabilities — It is as important in maritime warfare as it is for the land battle. Its applications include:

- (a) Anti-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 so necessary in modern maritime 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 quality are particularly important. These are base mobility, proximity and the organic nature of this air support.

Modern aircraft can be deployed quickly from one area to another, but the new base from which they are to operate must be equipped with internal and external communications, command and control arrangements,

accommodation, self-defence facilities, workshops, ammunition stocks, fuel stocks, spare parts and stores and a logistic organisation to support them. Australia has relatively few such bases. An aircraft carrier has the advantage of being a fully equipped and mobile base. It can quickly change the focus of air operations to where it is most needed.

The need for proximity of the tactical air base to the area of operations is not peculiar to maritime operations. Availability of aircraft depends not only on the numbers of aircraft which can be provided, but also on the distance of the air base from the scene of action. With carrier-borne aircraft, the transit time is minimised, and aircraft going unserviceable in transit can be quickly replaced.

The organic nature 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 maintain aircraft on task for long periods.

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 frigates, destroyer escorts and the tanker; this force would operate in groups and could undertake strike operations, convoy protection, offensive support for land forces and area defence.

Secondly, the submarine force, which may be used for covert surveillance and intelligence gathering during periods of tension and low level contingencies, and then for maritime strike, offensive ASW, offensive mining and clandestine operations during more serious contingencies.

The third group consists of the remaining mixed, but important, ships ranging from the repair ship through amphibious/logistic ships, patrol boats to the very important mine-countermeasures vessels.

The first two groups, our major surface warships and submarines, contribute significantly to Australia's regional maritime superiority which I believe is fundamental to the achievement of the national security objectives of this island nation.

### MAJOR ACQUISITIONS

The slides have shown you some of the "Fleet in being", some of them are near the end of their useful lives and they are consequently very costly to keep running. The Government has approved a number of replacements.

The new carrier is presently approved as an anti-submarine helicopter carrier, but will be capable of operating STOVL aircraft such as the Harrier. Our plans for the acquisition of such a ship has been thwarted with the UK decision to retain HMS Invincible. Currently, we are evaluating a range of options and recommendations will be made to the Government before the end of this year. The new underway replenishment ship, HMAS Success, will have a better capability than the present ship, HMAS Supply, by being able to replenish the Fleet with stores, ammunition and missiles in addition to liquids. The Government has also agreed to build a second replenishment ship which will then provide a greater degree of flexibility in fleet operations.

Our ageing destroyer force will be progressively augmented and then replaced by the new FFGs of which four have been ordered from the US; two of these —



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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 regaining 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 and then replaced with the Fremantle Class; fifteen in 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 for the Fleet has grown 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 10 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

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

#### MANPOWER

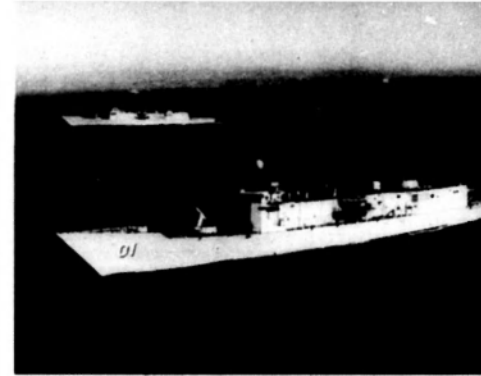
I have already mentioned, briefly, the importance of well-trained and highly skilled manpower in maritime defence. The capability of the Navy now is fully dependent on the skills we have now. (And, of course, in this regard we must not forget the 3500 Reserves who provide the basis for our expansion 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 attractive to civilian occupation by virtue of the skills and maturity the Service has helped to develop.

The Coldham pay rises have helped of course and there are already indications 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 the Army or Air Force. The greater proportion of our civilians — 56% in fact — are employed on major repair and refit support.

The close control of civilian manpower levels by Public Service ceilings has 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



The most modern surface units in the RAN today are the new FFG class frigates with two in service and another two under construction. (Photo — RAN)

administrative procedures in the specialised professional and technical manpower areas, and to allow some increase in ceilings so as to build up our capability and experience levels in these areas. Failure to achieve this build up will put at risk the timely introduction of new equipments and meeting of new commitments.

You will know of the creation of the Department of Defence Support which will manage our dockyards as well as laboratories and factories but whoever manages them must have the people.

#### MINE WARFARE

Another problem area is that of mine countermeasures. Large areas around Australia are susceptible to mining and mining of ports, rivers, anchorages, and the shallow continental shelf areas is a simple and relatively cheap method of waging war. Mines can be laid by a wide variety of vehicles making it an easy task to seal ports from the outbreak of war. Our present mine counter-measures force is small and ageing, and it would have difficulty in keeping just one port open.

#### FFG — HELICOPTER

You may also be aware that our FFGs do not have a surface surveillance and targeting helicopter. Although the Bell 206 is being used in the interim to provide the FFGs with basic helicopter operating experience, it cannot provide vital operational training.

### FUTURE PROSPECTS

#### CONSOLIDATION

For many years now we have been developing a Naval structure for the future, which is relevant to Australia's special needs. In general we have been successful but there are some gaps which now must be filled. I speak particularly of our mine warfare and mine counter-measures capabilities, which I mentioned earlier, and those areas highlighted during the Falklands crisis: For example, close in weapon systems and STOVL aircraft.

Now is the time for us to re-assess our current capabilities and to consolidate our forces.

#### USE OF CIVIL ASSETS

In man, contingencies there will be a need to requisition merchant ships to form a mobile logistic support force and sea transport force to enhance the endurance of Fleet units. Merchant ships suitable for defence purposes have been identified and plans are in hand to inspect them to ascertain how they may need to be modified, armed and manned.

Forward support bases in remote areas could also be needed. A policy for their establishment has been developed and a Port survey programme will be started shortly. To a large extent this is an exercise to update our knowledge of the existing infrastructure upon which such forward bases would rely.

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 interim report presented to Government in May last year has been well received generally by Navy, although the transfer of the dockyards to the control of the new Department of Defence Support 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 conducts its business. Navy will be particularly keen to see in the UTZ Committee recommendation improvements in the Force development process, the administration of civilian personnel and in the alignment of authority with responsibility.

#### SUMMARY

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

The Royal Australian Navy is a dynamic organisation. It has been, and is being, adapted to meet our 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 difficulties plays significantly with the Defence dollar and this will be compounded amongst 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 CDRE J. A. ROBERTSON, RAN(ER)  
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 RAF, of which David Divine said, "Its greatest problem was that it believed its own propaganda".

And here in the one Australian city whose crest is distinctly naval — an anchor and a stylised naval crown — Sydney should never forget that it always has and always will depend on the fact that it is one of the world's major seaports with unrivalled access to the world's great highway. One Russian geo-political theory 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 hosts 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 want me to thank our speakers and 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 discussions. If you weren't paying attention then I suggest it's your loss — but no one is going to be asking questions at the door.

I believe it has been valuable to hear directly from senior naval officers who are currently working on the matters we have discussed today. This gives their words an authenticity which is not possible for those like myself who have been out of the Committee for some time.

The disadvantage they suffer from is that they cannot necessarily say what they would like to. It was Dr Tom Millar, I think, who observed that the Chiefs of Staff could be made to stand on their heads or face in two directions at once in their 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 flagship MELBOURNE. (Photo — RAN)

So I propose to use the time available to make a few controversial remarks about democracy, freedom of information, the media (and the Sydney-based 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, the Navy League and the Naval Association can disown me if they want to.

I happen to hold a view which may be considered unduly naive in a world-wide 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 confers to influence public opinion.

I do not share the view, at once patronising 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 last twenty years. And I think it is high time that the Australian public, democracy, and the Navy got a fair go.

Let me make it plain that while this is a general criticism there have been some organs of the media which I believe 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 unbalanced, but so close to being malicious it does not matter.

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

In pursuit of this dangerous activity there have been several techniques used:

- One: If the news about the Navy is good, do not publish it.
- Two: Seize on one small and relatively minor aspect, and treat it as the whole; unbalance the report and so turn a generally favourable account into a shock-horror controversy which, with luck, will run for a few days.
- Three: Give the Navy the undergraduate, whimsical, satirical treatment and so turn it into an object of derision.
- Four: Do not print letters pointing out errors of fact and questionable judgements, or edit them to reduce their impact.
- Five: Do not question the polemics, 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 back in the schoolyard in primary school days when one yahoo starts calling you names, other pitiless little 'n's take it up and then it does not seem to matter what you say or do, the volume of irrational mass hostility just becomes overwhelming. I find it very sad that a decent young man who only wants to serve his country should be made to feel that way.

It is notable, for instance, that there has been no public analysis of the Katter Committee Report on aircraft carriers. Yet it contains obvious errors of fact and relies on comfortable assumptions to escape the consequences of its own very well presented arguments why Australia must have an aircraft carrier. One can only conclude that a bland report of the Committee's unfavourable conclusion suits the anti-carrier position widely adopted as editorial policy. But it does not say much for balanced reporting.

Of course, criticism of the military in peacetime, or what we fondly imagine is peacetime, has always been a popular sport in democracies. What I cannot understand is why media critics of the Navy do not extend this same courtesy to the Air Force and Army. Our small 17½ thousand man Navy is a 24 hour a day, 7 days a week operationally ready force. You may remember that it sailed a sizeable proportion of the Fleet fully stored for disaster relief at Darwin on a Boxing Day.

On the other hand, according to Air Vice Marshal Barnes, our 22,000 man Air Force is a 40 hour a week, one shift Air Force, which would need expanding nearly three times to provide a similar level of sustained operational capability. In equivalent terms it is a "one carrier" Air Force, but although this information is freely available, a discreet silence hides it from the public. Nor, it seems, does anyone seem to find it newsworthy that it is going to cost something in excess of \$3 billion for an operational force of, probably, 48 single seat fighters. And, furthermore, another \$3 billion or more to equip it with weapons, bases, tankers, command and control systems, and all the rest to turn these few aircraft into an operational weapon system. This seems to me to be grossly out of balance with the sort of money we are apparently prepared to make available for Defence in this country.

No one queries the fact either that our 33,000 man Army can only produce two lightly equipped battalions at short notice. In comparison the 8000 man Royal Marine Corps produced 5000 troops at short notice for operations in the Falklands. Now there are very good reasons why the teeth to tail ratio of the Australian Army should be different from the Marines, but the difference is striking. And if we are so desperately short of funds for Defence as everyone seems to think perhaps we should rethink the concept of being able to fight a 2 Division Corps battle in the deserts of North West Australia — a sort of El Alamein revisited — against a non-existent invader.

I have no wish to be dog in the manger about this but if money is so short as to preclude Australia having an adequate Navy perhaps it is time to stop being driven by a questionable past and to rethink the whole thing through again.

The point of this brief exercise into the abrasive and perhaps, for some, painful truth, is that I will be very interested to see how this afternoon's symposium will be reported. Method One? No report at all? Will it be given the whimsical treatment? Will only the aspects which can be used as a stick to beat the Navy be reported?

All of us here will have our own idea of how fairly today's content will be reported. But it is not just today's news which is the issue. There are larger issues of the abuse of power by some sections of the media, and the working of the democratic process in Australia.

I am sure no one in the Navy, or its supporters expects, or even wants, a sudden rush of be-nice-to-the-Navy — the shock could be very dangerous. And if the Navy makes an ass of itself it deserves everything it gets.

There is an old saying in the Navy, "If you can't take a joke you shouldn't have joined", but I think a lot of what has happened in the media in the last 20 years would strain the most amiable sense of humour. What I am suggesting is nothing more than a fair go.

So, I hope today's symposium, fairly reported, might mark the beginning of a new era of a fair go, so that the Australian public may have the opportunity to make up its own mind about important Defence issues — and not be subjected to the partisan opinions it has been getting for far too long.

Whatever happens I have much pleasure in warmly congratulating the Navy League and the Naval Association for their efforts today in trying to present the Australian public with the sort of information it surely deserves — And I now declare these proceedings closed.



Dear Sir,

The Naval Awareness Symposium was a great success. The Navy League and The Naval Association are to be congratulated.

With regard to Naval Dockyards being in Sydney, I would like to recall some history, when on the outbreak of World War II all British ships had a sealed envelope from the Admiralty in the Masters' safes to be opened on receiving a radio message.

On receipt of this in September, 1939, the P&O passenger ship "Strathnaver" proceeded to Sydney and, after disembarking passengers, berthed alongside Cockatoo Island where an Engineer Lieutenant Commander inspected the hospital housing aft for the mounting of a six inch gun and a 4.7 inch anti aircraft gun. With strengthening made as required for such large armament "Strathnaver" was at sea in a few days ready for war with the two guns, ammunition and a few naval gunnery ratings. The Third Officer was given instruction by the Navy and carried out the duties of Gunnery Officer with some of the ship's men making up full gun crews.

All this was achieved by Naval experts and Dockyard ability. SYDNEY NEEDS ITS DOCKYARDS WHERE THEY ARE; PARTICULARLY IN TIMES OF EMERGENCY. The placing of such guns successfully required the hard core of Naval Knowledge and Service being available.

E. B. BEEHAM,  
LTCDR RAN(RS) (Ret'd).



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## European Report

by **ANTONY PRESTON\***

*Naval Editor, Defence*



*Sea Knight landing on USS MOUNT WHITNEY.  
(Photo — A. Preston)*

**T**HE 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 enlisted 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 VTOL 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

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**HMS ILLUSTRIOUS taking over from HMS INVINCIBLE in the Falklands Task Group. This was the first occasion that the sister ships had been seen together. (Photo — RN)**

amphibious task group, and had been caught somewhat unawares by the NASSAU's sudden departure. Thereafter she maintained station faithfully, presumably to monitor the Harrier operations, but in fact the whole Striking Fleet had been shadowed by a variety of Soviet AGIs and submarines on its long haul across the Atlantic from Norfolk, Virginia. It was during this part of the operation that the British frigate HMS LOWESTOFT used her new type 2024 towed array sonar to locate and hold a Soviet submarine for several hours, a vivid demonstration of the new sonar's capabilities.

## ROYAL NAVY NEWS

The Falklands conflict has tended to overshadow several interesting developments, notably the cancellation of the sale of HMS INVINCIBLE to Australia, the ordering of a ninth BROADSWORD class anti-submarine frigate, the announcement of a new class of diesel-electric submarine and an order for a new class of minesweepers. The INVINCIBLE returned to Portsmouth on 17th September, having handed over the responsibility for air defence of the Falklands to her sister ILLUSTRIOUS three weeks previously. It is interesting to note that in view of Argentine claims to have destroyed more Sea Harriers than the 10 admitted by the British, that it has proved possible to account for them all:

- 1 (XZ438) crashed at Yeovilton 17th May.
- 1 (XV439) retained for training at Yeovilton.
- 1 (XV440) retained at Boscombe Down for trials and training.
- 3 (XZ450, XZ456 and ZA174) shot down in Falklands.
- 2 (XZ452 and XZ453) missing, believed collided in fog.
- 1 (XZ454) crashed off Cornwall 1st December, 1980.
- 1 (XZ497) retained for training and trials at Dunsfold.
- 1 (ZA192) crashed while taking off from HERMES.
- 12 returned from HMS HERMES 19th July (8 redeployed to ILLUSTRIOUS).
- 8 returned from INVINCIBLE 17th September (2 redeployed to ILLUSTRIOUS).
- 1 (ZA195) still under construction.
- 2 retained ashore at Port Stanley as shore CAP.

In addition three RAF Harrier Gr.3s were lost and a fourth was badly damaged in a landing accident after the capture of Goose Green, but even with them the total falls far short of the 21 claimed by Argentina.

The new Type 2400 submarines, 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 and her sister BRILLIANT in battle. The BRILLIANT's helicopters sank an Argentine patrol boat with their 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 2024 towed array sonar more efficiently, and the third of the class will have the new Marine 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 minesweeping in the Falklands, which is surprising because two of the new 'Hunt' class MCMVs 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 sophisticated influence mines expected the sweepers found only moored contact mines. The one I was shown was a simple Herz horn type, apparently a copy of a World War II German type of local manufacture. The Argentines are known to have modern magnetic, acoustic and pressure mines in their inventory, and 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 serious resistance was not expected the best military equipment and fighting units were kept back.

The four new minesweepers are the production version of the EDATS or Extra-Deep Armed Team Sweep trawlers which were converted from hired fishing craft a few years back. The ST DAVIDS and VENTURER proved highly successful at sweeping

the so-called 'Continental Shelf' mine, using specially developed depth-keeping gear to keep their sweeps down to 1000ft or more, and the new ships will take over this task from regular sweepers, and in addition will provide the Royal Naval Reserve with new training tenders. Being intended to deal with bottom mines laid at the edge of the continental shelf they do not need the low magnetic signature of shallow draught minehunters, and the main requirements are 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 method of using 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: at the same time the Navy gets small craft which can always be used for subsidiary duties in wartime, such as minesweeping 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-ship of the class was delivered last January, followed by the PANTHERE in February. The LEOPARD and LYNX are the next two and the rest will be completed by the end of next year.

Work is proceeding on the first of the new C70AA 'corvettes', which would be known as DDGs elsewhere. On a projected normal displacement of 3900 tonnes the armament is impressive: 40 Standard SM-1MR surface-to-air missiles, eight MM-40 Exocet anti-ship missiles, ASW torpedoes, two 100mm dual-purpose guns and both hull-mounted and variable-depth sonars. The principal surveillance sensor is a new phased-array radar designated DRB-11, and the ships will be provided with a full outfit of passive and active electronic warfare equipment.

Another advanced feature is a new fast-running diesel, the double-supercharged 18-cylinder Pielstick PA6 BTC. Four of these will drive twin shafts to produce a sea speed of 30 knots on 42,300 horsepower. The new diesel promises much higher speed, with a good power-weight ratio, and it is currently being tested in a new AVISO, THE COMMANDANT L'HERMINIER.

## SHIPBUILDING IN GERMANY

The lifting of the Common Market embargo on arms supplies to Argentina has permitted work to begin again on contracts at Blohm and Voss' shipyard in Bremen. The last of four MEKO frigates, the SARANDI, was launched on 31st August. She and the ALMIRANTE BROWN, LA ARGENTINA and HEROINA are similar to the Nigerian ARADU, apart from having MM-40 Exocet missiles in place of Otomat, and Rolls-Royce Olympus and Tyne gas turbines in place of CODOG installation in the Nigerian ship. Although Rolls-Royce are keeping a low profile we understand that deliveries of the machinery took place before the outbreak of hostilities.

Six corvettes are being built locally at the AFNE yard, Rio Santiago, but equipment is being supplied by Blohm and Voss. They are also prefabricated on the MEKO principle, with containerised weaponry and sensors. The armament includes four MM-38 Exocet missiles, a 76mm OTO-Melara DP gun and two twin 40mm Breda Compact close-in weapon systems. The lead-ship AR ESPORA and the AZOPARDO and SPIRO are well advanced, but nothing is known of the last three.

The corvettes displace 1460 tonnes and are driven by twin-shaft diesels at a speed of 27 knots. The twin uptakes pass on either side of a small hangar capable of accommodating a Lynx helicopter. The impression from published sketches is of a somewhat ugly but functional light escort. In essence it is only a 'MEKOized' version of the flush-deck corvette designed for Spain and Portugal, but with the sale of the big frigates they mark the first big impression made on the world export market by West German shipyards, apart from the renowned missile boats from Lürssenwerft.

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## Maritime Concepts of Operations Related to Naval Air Power

Seaborne air capability is central to the Naval task group concept upon which the RAN is structured. Its absence would affect how other countries perceived Australia's deterrent posture and our potential and resolve to render assistance to allies. In addition it would affect our ability to respond to contingent situations and the range of options open to us would be reduced.

This article examines maritime concepts of operations related to naval air power, indicates the inter-relationship of different weapon platforms and weapons, and highlights the contribution of an aircraft carrier capable of operating anti-submarine (ASW) helicopters and short take-off and vertical landing (STOVL) fixed wing aircraft.

**ENEMY CONCEPT OF OPERATIONS**  
The strategic setting adopted is the medium level regional contingency in which the enemy order-of-battle includes reconnaissance and strike aircraft, surface naval units and submarines. Weapons employed include anti-shipping missiles, torpedoes, bombs, rockets and guns. These capabilities are commonly available amongst nations within our region.

At the level of conflict under consideration, the potential enemy's general concept of operations could include:

- a strategy of deception to create a misleading impression of his capabilities, intentions and plans;
- surveillance, reconnaissance and intelligence gathering activities to provide information for operational planning;
- the securing of the essential bases from which operations could be mounted and maintained;
- the establishment of sea control and air superiority;
- interdiction of Australia's sea, land and air lines of communication, including blockade of some Australian ports; and
- occupation or neutralisation of appropriate offshore Australian territories such as Cocos and Christmas Islands.

### AUSTRALIA'S CONCEPT OF OPERATIONS

Should our deterrent posture fail to prevent a potential aggressor from initiating hostilities and he adopts a concept of operations outlined above, it is clear that, initially, effort would be directed towards neutralising his strike capacity, with the aim of denying the enemy sea control and air superiority, while obtaining these elements for ourselves. Because of the vast areas of our maritime approaches and the limited resources available to both ourselves and an enemy, such control could only be over limited areas of our northern approaches and could not be continuous.

Hence we would seek to control these areas for purposes of military resupply or for specific offensive or defensive operations. Because of our limited resources compared with the broad range of tasks we may have to undertake, we would need to be selective in the allocation of our military resources. It is in this context that particular elements of our force structure which can contribute to a range of capabilities and have the potential to change roles are of particular importance.

Australia could be involved in a range of offensive and defensive operations, which in the first instance, will almost certainly be maritime in nature. These operations could include all or any of the following:

- reconnaissance and surveillance to provide intelligence of the enemy's disposition, movements and intentions;
- strategic strikes against enemy home and forward bases, lines of communication,

by  
**CAPTAIN  
OSCAR HUGHES**  
*Aircraft Carrier Project Director*

maritime forces at sea, communications and control centres and weapons to reduce or eliminate his offensive capabilities and destroy his ability to provide adequate support to his operational forces:

- offensive operations to deny sea control and air superiority and obtain these elements for ourselves; and
- defensive operations to provide protection against enemy attacks from sea and air on military units, lines of communication, military bases and support infrastructures.

The principal roles of maritime forces, in support of these operations are:

- maritime surveillance;
- maritime strike;
- air defence; and
- anti-submarine warfare.

### MARITIME SURVEILLANCE

Maritime surveillance is the systematic observation of surface and sub-surface sea areas to locate, identify and determine the movements of ships, submarines and other vehicles, friendly and enemy, proceeding on or under the surface. A distinction is drawn between strategic and tactical surveillance operations. The former essentially relates to broad area operation not specifically related to a particular operation, whereas tactical maritime surveillance generally involves surveillance of areas in the vicinity of maritime forces.

The primary assets in the Australian inventory for strategic surveillance are the P3C and RF111C aircraft. These might be supplemented in the future by Over The Horizon Radar (OTHR) if successfully developed. These assets could also contribute to tactical surveillance in support of task force operations. In the case of the P3C and RF111C however, this would be at the expense of their other primary functions.

Tactical surveillance could also be provided by organic helicopters and/or STOVL aircraft. The use of these aircraft would provide particular advantages in:

- assured availability;
- responsiveness to needs which might arise with little warning; and
- the ability to brief for operations and to receive intelligence without the need to break communications silence which could be intercepted, thus giving away the location of the task force.

### STRATEGIC STRIKE

The fundamental difference between a strategic and tactical operation is that the former is directed against the enemy's war making capacity and the latter against his military capability. However, range is often a factor in distinguishing between a strategic and tactical capability, as the nature of strategic

operations implies movement from one theatre of operations to another.

Strategic strike operations can be conducted using air, surface or sub-surface units. Although in some situations naval surface combatants could be tasked for strategic strike operations, on most occasions either air assets or submarine forces would be employed.

Either land based or carrier based aircraft could effectively conduct strategic strike operations. The land based strategic air strike capability is invested in the F111C and the F/A-18 when it enters service. Their range can be increased with in-flight refuelling. Land based strike has an element of predictability that does not similarly apply to carrier operations. The location of strike aircraft bases is well-known and their range and their radius of strike operations are predictable. An enemy could destroy his defensive assets accordingly. On the other hand a carrier through its mobility, range and endurance provides an element of uncertainty regarding targets that can be interdicted. The carrier can be used to divert or disperse an enemy's defensive resources, and will increase his problems of providing protection to priority infrastructure. The carrier's ability to move the focus of its air operations some 1500 miles per day and to move quickly in and out of the range of tactical fighters are important characteristics.

The advantages of carrier based aircraft over land based aircraft in the strategic strike role are:

- the capability of interdicting targets outside the range of land based aircraft;
- the ability to reduce the range between target and carrier in order to increase aircraft weapon load and decrease fuel requirements;
- the ability to move the operating base to anywhere within our maritime area of strategic concern;
- the versatility of being able to change roles rapidly; and
- the ability to strike at areas without protruded overland or high level flights which would increase the probability of detection and interdiction by enemy forces.

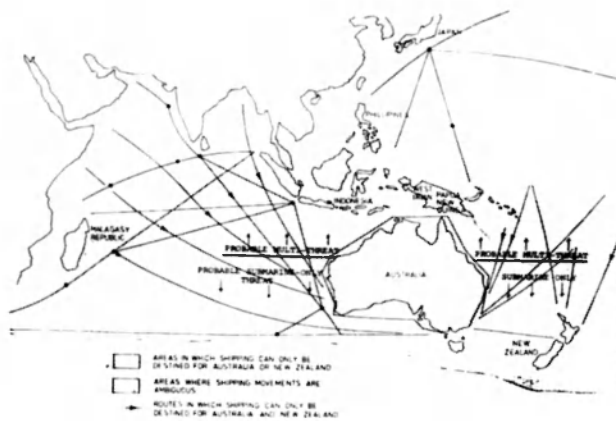
### TACTICAL MARITIME STRIKE

Tactical maritime strike operations can be conducted by elements of the Australian Defence Force including:

- carrier and land based strike aircraft;
- submarines; and
- surface combatants including both destroyers and patrol craft.

In the absence of a comprehensive air defence system the capability of aircraft to interdict shipping has increased dramatically since the Second World War, particularly with developments in detection and surveillance systems and precision guided munitions which now provide significantly greater probability of finding targets and of a single weapon hitting them in the past. Single weapon lethality has also increased and may be devastating against small ship targets.

Aircraft play a critical role in maritime strike operations through their ability to engage an enemy's surface combatants beyond the range at which they could interdict our surface



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

- fighter aircraft both sea and land based, are the only method at present of providing tactical air defence at distance from a force;
- without air defence in depth in a hostile air environment, a surface force is placed at greater risk;
- without a carrier, air defence in depth can only be provided within effective range of friendly fighter bases; and
- employment of land-based aircraft on CAP is inefficient in most circumstances.

The importance of organic naval air defence aircraft compared to land based aircraft are:

- assured availability;
- more assured responsiveness to early warning detections;
- their ability to provide a rapid surge capability in response to raids by large numbers of strike aircraft; and
- beyond the effective range of land based aircraft they are the only means of providing air defence in depth.

#### ANTI-SUBMARINE WARFARE

The submarine is capable of conducting operations at long distances from base and armament carried could include missiles and torpedoes. The aim of anti-submarine (ASW) forces is to deny the enemy effective use of his submarines. This can involve capabilities extending from the detection of enemy submarine bases and supporting infrastructure through to specific operations against deployed enemy submarines. Australia's ASW capability must be assessed against the potential threat, resources available for ASW and the trends in equipment and sensor development.

ASW operations, apart from those related to interdicting an enemy's submarine infrastructure and lines of communication, are generally related to the mid-ocean, coastal and local areas. In terms of providing strategic ASW, surveillance, passive sonar arrays with P3Cs reacting to detections would be the preferred elements. However for operations involving close escort of shipping, i.e. where a significant submarine threat exists, a concept of defence in depth, as far as defence would apply. This would involve strategic surveillance systems to provide broad area coverage, then in the mid-field (i.e. 60-100nm) surveillance by P3Cs and ASW helicopters, using sonobuoys, then an inner screen consisting of destroyers and ASW helicopters employing active sonar. It should be emphasised that these alternative systems as each contributes in some unique way to total ASW effectiveness. The significance of various elements of this mix will vary depending on such factors as water depth, water temperature characteristics, ambient noise and the characteristics of enemy submarines.

It is often argued by proponents of the use of land based aircraft to provide air defence for surface task groups that F/A-18s should be used to provide a combat air patrol (CAP). The use of such aircraft on CAP is very demanding on aircraft availability, aircrew and support personnel. To keep on F/A-18 aircraft on CAP some 200 nm from base would require about eight aircraft to be dedicated to the task, whereas at 500 nm from base, in the order of 15 F/A-18s would be needed. Even if two aircraft were continuously maintained on CAP, which would require the full commitment of between one and two squadrons of F/A-18, it is doubtful that they would provide sufficient capability to break up most air attacks to the extent where saturation of shipborne defences were not a significant problem.

An alternative to CAP operations would be the maintenance of land based fighter aircraft on alert and scrambling them in response to early warning detections. Such an option would be unlikely to prove an effective solution because it would involve detection of an enemy strike in the early stages of flight and assumes our air bases would be sufficiently close to our naval forces to react in a timely manner. Such an early warning capability is not available in the Australian Defence Force and would be unlikely to be provided by E2C aircraft.

In summary, the main problem faced by land based air in support of air defence operations is the inability to be available in sufficient numbers to counter enemy air attack.

#### THE CORE FORCE CONCEPT

This concept postulates that sufficient capability should be provided as an expansion base for combat forces when needed — by implication, in the light of a developing threat. The quantitative measure of a capability which forms part of the core force is, again, a matter of judgement on which opinions could be expected to differ. Everything depends on the assumptions adopted in deciding how much is enough; the variables include:

- the length of warning time likely to be available for expansion;
- the types of the force terminal force needed;
- the likely availability and lead times of equipment and technology which would have to be obtained abroad;
- the capacity of Australian industry to produce or sustain the terminal force, and the time it would take;
- the capacity of the Australian population to provide the manpower required; and
- the balance to be struck between capabilities.

The Falkland Islands conflict highlighted the expansion base inherent in a STOVL/helicopter carrier to conduct surge operations from other cheaper platforms in times of emergency or war.

A purpose designed carrier of the LPH or INVINCIBLE type would provide a base for the full development of all the requisite skills needed in peace-time but required to be expanded in an emergency. It has recently been demonstrated that merchant ships could be converted quickly and relatively inexpensively to provide an acceptable wartime capability to operate and support limited numbers of aircraft for short periods of 10 to 14 days.

Compared to ships designed and equipped to sustain operations over prolonged periods, converted merchant ships would be efficient in communications, supply and maintenance support facilities, magazines, damage control, sensors and weapons, utilities, etc. and would provide extremely austere accommodation. Wartime operations imply greater acceptance of risks in all aspects of operations.

Converted merchant ships would normally be deployed as escort carriers in company with a DDG or FFG and could be employed in areas of probable ASW threat, i.e. in the oceans surrounding the southern half of Australia as depicted in the outline map, where a lesser threat from enemy air and surface units could be anticipated.

#### VULNERABILITY

Every airfield, base and city in Australia is a 'static' target. They are not easy to defend and are unlikely to move. They are certainly easier to hit at any given moment than a ship at sea (although, in the case of satellite and computers it is not as easy to hide a ship at sea as it was, but location may still prove difficult), and identification can also be difficult. A ship at sea is harder to find and damage than an airfield ashore which can be targeted years ahead.

Vulnerability, or its converse, the ability of a ship to survive, is obviously a mixture of many factors including:

- intelligence — what weapons and potential an enemy has;
- surveillance — where the enemy is;
- air defence — defence against enemy aircraft and missiles;
- electronic countermeasures — deception to mislead the enemy of own position, make-up and type and confusion and distraction of enemy weapons and sensors;
- own defence weapons systems — a mixture of medium range missiles, close range weapons and guns and electronic countermeasures; and
- damage control — ships must be built to survive after receiving damage.

Generally a big ship is harder to sink than a small ship. She has more watertight compartments to keep her afloat, more back-up generators and control systems to keep her alive after taking damage probably more survivors to bring her back into action. A STOVL/Helo carrier can sustain greater levels of damage and remain operational compared to a conventional carrier. For example, speed is less critical, wind direction is less important, and the flight deck can sustain extensive damage without significantly inhibiting flying operations. In comparison a conventional carrier has a number of critical aviation systems (e.g. catapult, arrestor gear) which must not sustain damage.

The potential of a STOVL/Helo carrier to sustain damage and remain operational reduces her own vulnerability to further damage while continuing to provide air cover to ships in company.

#### SUMMARY

In peacetime a carrier, by its means, perhaps often the only means, of asserting national power in a remote area. The consequences of a failure to assert that power are at best difficult to calculate; moreover, the need to be able to influence at a particular time in a particular place is not likely to be foreseen at the time, perhaps 10 years earlier, when a government decides to build a carrier capable of that mission. History is a guide, but Western governments have a habit of imagining that somehow it will not be repeated, particularly when large sums of money are involved.

In wartime, both inside and outside the effective range of land based aircraft, the carrier contributes to the offensive and defensive capabilities of a naval task force and hence to our ability to protect merchant shipping, strike enemy targets at sea and ashore and survive in a hostile environment. Within the range of land based air the capabilities of the task force can be enhanced in anti-submarine warfare, strike and air defence. Alternatively the carrier and its aircraft can be used in support of land based aircraft or ground forces.

A decision not to acquire a new carrier would mean acceptance of a significant reduction in maritime capability which could be interpreted as a weakening of national resolve to contribute to regional stability. Without a carrier the balance of the maritime force structure would be lost. A maritime strategy totally dependent on land based fixed wing air support would involve considerable risk and would seriously reduce the options available to Government. A carrier, with organic fixed and rotary wing aircraft and appropriate command and control facilities would allow concentration in a naval task group of the range of offensive and defensive capabilities required for maritime operations close to and distant from Australia's shores. A new carrier would provide capabilities until the Year 2020, some 10 years beyond the expected life of HMS INVINCIBLE, albeit with an increase in project costs of about 50 per cent. The project costs would be spread over a longer period because of the long build time involved. In addition the initial payments required would be somewhat less than planned for HMS INVINCIBLE.

Investment in a new purpose designed carrier and associated aircraft would absorb only a very small percentage (about 1 or 2 per cent) of the Defence Budget over the period until end of life of a new ship. To relinquish the capabilities afforded by an aircraft carrier to a short term financial constraints would be to accept disproportionate long term capability deficiencies.

# The Carrier Switch

by GEOFFREY EVANS  
Federal President

The reported decision by the Defence Force Development Committee to recommend against the acquisition of an aircraft carrier is rather surprising and raises several interesting points; one of these relates to upper-level decision making in the Defence Department, and another to the effect of the DFDC recommendation (if it is accepted by the Minister for Defence) on Australia's foreign relations.

Of the 98 standing committees in the Defence Department three in particular strongly influence the advice on defence matters that eventually goes forward to the Government:

The Chief of Staff Committee: It consists of the Chief of Defence Force Staff (principal military adviser to the Minister for Defence) and the Chiefs of Staff of the Navy, Army and Air Force who are primarily responsible for their own Service. It is the senior military committee in Defence.

The Defence Force Development Committee: Members of the Chiefs of Staff Committee, plus the Secretary of the Defence Department (principal civilian adviser to the Minister) who chairs the Committee. It is required to take resources into account as well as military needs.

The Defence Committee: The same membership as the DFDC plus the Permanent Heads of the Departments of Prime Minister and Cabinet, Treasury and Foreign Affairs. A consultation/discussion group expected to take broader issues into account.

The DFDC recommendation is surprising in that the military members of the committee (who form a majority) decided only three years ago — in 1979 — that the Defence Force needed a carrier. To quote Admiral Sir Anthony Synnott at a Katter Committee hearing on May 10, 1982:

"The Chiefs of Staff Committee made a study of the aircraft carrier... and spent a matter of weeks deciding whether or not there was a place for it in the Australian Defence Force structure... The Committee was chaired by General Macdonald. I was Chief of Naval Staff, so it was not weighed in a particularly naval fashion as some of you would perhaps like to think bearing in mind its conclusion... (the committee) found there was a need for an aircraft carrier. They thought it was essential for anti-submarine purposes and important for various other purposes."

In the event, after discussion in several defence committees including the DFDC, the

Government decided in September, 1980, to replace Melbourne with a "purpose built" ship — a helicopter carrier — with the capability to operate STOVL aircraft — and in February, 1982, approved the purchase of INSALICIBLE. As is well known, Britain later decided not to sell the INSALICIBLE.

No one could seriously suggest that the international climate has changed for the better since 1979 (or in the last nine months). In fact it is widely accepted here and abroad that the climate has deteriorated. Further, from a purely local, practical point of view, the type of carrier and aircraft proposed for Australia have been tested and found successful in actual combat — in the short but bloody war in the South Atlantic. What then has changed?

The most obvious changes have been in the military membership of the committees mentioned — only we of the 1979 members remain — and in the economic situation. As the military requirement has not lessened it must

be supposed that the present Service leaders (with the probable exception of CNSI) have either ideas different from their predecessors or been overwhelmed by money worries.

It is not unusual for changes in leadership to be accompanied by new ideas and thinking; even so the stakes in defence are very high indeed and major changes every two to four years, when the senior military posts change hands, are unlikely to contribute to the stability and effectiveness of the Defence Force.

The Service Chiefs cannot of course ignore prevailing or projected economic circumstances, on the other hand it is their duty to put forward the military requirements of the country and clearly a navy rather than a coast-defence force is one of them. Australia is neither insolvent nor by Western standards a high defence spender, and the Chiefs appear to have a good case for additional funds; convincing the Government of the military requirements would seem a better cause than trying to

devise a Defence Force to fit an inadequate sum of money.

It is doubtful whether members of the Cabinet, in particular the Prime Minister and the Minister for Foreign Affairs, will be overjoyed by the reported developments in Defence. Quite apart from strengthening the extremely important defence association with the United States, with its obligations as well as benefits, the Government has been steadily moving towards closer political and economic relations with regional countries; mutual security issues must inevitably be involved.

Any suggestion that Australia, as dependent on secure lines of communication as any country in the world, proposed to reduce its already barely adequate maritime capability could only be greeted by its allies and friends with astonishment — and dismay.

One can only hope that a broader and longer-term approach will be adopted by the Cabinet.

## EDITOR'S COMMENTS

### THE FALKLAND ISLANDS CAMPAIGN — PRESENTATION

A presentation of the Battle for the Falkland Islands was arranged by the NSW Branch in Sydney at Tattersall's Club on the evening of Monday, November 29. The presentation took the form of an opening address by one of the State Vice-Presidents of the League, Rear Admiral Andrew Robertson, followed by the guest speaker, Major General M. Carleton-Smith, the Head of the British Defence Liaison Staff in Canberra. Selected video tapes of the actual campaign were shown for about two hours, using a new system of screen display as well as TV monitors.

In his opening remarks, Rear Admiral Robertson outlined the concern of the Navy League over the slowly changing maritime balance and the erosion of the position of the Western allies in the oceans of the world in recent years. The Navy League was trying to improve community awareness and understanding of maritime matters, noting the implications for Australia and its defence. He called for an expansion in the membership of the League and invited those interested to join.

He went on to say that for the first time since World War Two we have witnessed a limited war involving nearly all modern maritime weapons and an amphibious assault launched at short notice over a huge distance — one and a half times the distance from Vladivostok to Sydney. We have seen the power of nuclear-propelled submarines with their high speed, great endurance and obvious effectiveness in the age-old tactic of maritime blockade. We have seen the added flexibility given to navies by the much newer STOVL carriers which are no longer hampered by the constraint of having to turn into the wind to land on aircraft. For maritime warfare the new technology vertical take-off aircraft — The Sea Harrier — had proven itself handsomely in the only test that really matters — the

acid test of war, and that in often appalling weather conditions.

Admiral Robertson pointed out the value of studying carefully the Falklands War from all angles, political, military, technological, the role of the merchant marine, industrial support etc. While there were clearly differences in our position, including geography, there were also significant similarities — including that we too have Australian off-shore islands. We should however look at the war from the Argentinian viewpoint as well as that of Britain. A number of lessons of the war were highly relevant to the current carrier replacement debate and to the long-term defence of Australia. It was to be hoped that short-term economic problems would not distort decisions on long-term defence issues of very great importance to the nation.

An excellent presentation was then given by Major General Carleton-Smith, who outlined the in-service nature of the overall campaign and the many political and military aspects involved. With the aid of slides, the campaign as a whole was reviewed, experiences of individuals adding much human interest.

The General covered the remarkably swift requisitioning and converting of merchant shipping the way in which the British services responded to the challenge of war for which they were neither specifically equipped nor specially prepared — a form of warfare which had been expressly ruled out by the decision to abandon attack carriers and out of NATO area amphibious operations and to concentrate on anti-submarine warfare in the North Atlantic, and the huge logistic problems of the operation. He outlined the command and control arrangements, the importance of the Ascension Islands as a staging post/supply base, the naval battle including the remarkable serviceability rate of the Sea Harriers and

their success (27 aircraft, mostly Mirages and Skyhawks shot down without loss), the operations of nuclear powered submarines, the successes of and countermeasures to EXOCET, the role of the Royal Air Force, including reconnaissance, anti-submarine patrols, the bombing of Port Stanley airfield, ground support by RAF Harriers and Hercules and Chinook transports. The support given to the land battle by helicopters and naval bombardment was also shown.

General Carleton-Smith gave a comprehensive coverage of the strategy of the campaign, the landings, the land battle and the problems and uncertainties faced. Logistic, transport and movement problems were highlighted, as were the medical problems of trench feet and frostbite, the bitter weather, the shortage of ammunition, the worries on non-fireproof navy uniforms and current fire dangers in ships, including the too-extensive use of aluminium and plastic.

In drawing the evening to a close, Admiral Robertson reminded those present of the vivid scenes they had witnessed of damage and loss of ships on those occasions when adequate air-cover could not be provided. The implications for the carrier decision were obvious. The Navy League made no apologies for its view that replacement of HMAS MELBOURNE was essential if the RAN was to be able to operate effectively in war outside close proximity to the few RAAF bases. He also drew attention to major political decisions which had encouraged the Argentinians to attack — the announced decisions by the British to abandon their attack carriers and much of their amphibious capabilities — decisions which could clearly be interpreted by others as showing a lack of will and capability to defend British possessions, including distant island territories.



The four Navy Patrol Boats HMA ships ATTACK, ARDENT, ADVANCE and BAYONET berthed at the HMAS CERBERUS wharf prior to sailing into the stormy waters of Bass Strait for exercise 'Anchorman 82'.

## 'Anchors away for Reservists'

Photos by LSPH MARK LEE

About 80 Naval Reservists in four Patrol Boats battled the high seas in Bass Strait last October during their annual training exercise "Anchorman 82".

It was the first major exercise in which Naval Reservists have used their own Patrol Boats. Previously the Reservists have had to make use of Patrol Boats loaned to them by the Permanent Naval Defence Forces. The attack class Patrol Boats HMA ships ADVANCE, BAYONET, ATTACK and ARDENT were manned by Reservists from Sydney, Melbourne, Fremantle and Hobart Port Divisions and a handful of RAN personnel.

On their way to the exercise area the four Patrol Boat crews carried out individual and in company basic sea training manoeuvres before they made operational visits to Eden NSW, HMAS Cerberus, Westernport and Devonport, Tasmania.



HMAS ADVANCE wearing the flag of Rear Admiral Michael Hudson, Flag Officer Commanding Australian Fleet, embarked, leads the Fleet departure down Hann's Inlet towards Westernport Bay during the exercise.

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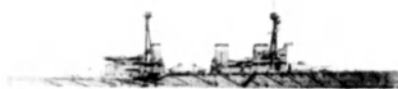
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The Patrol Boat HMAS ARDENT brings up the rear as she and her sister ships head for Bass Strait.





HMS INVINCIBLE.

**H**ISTORY has 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 Falklands Islands.

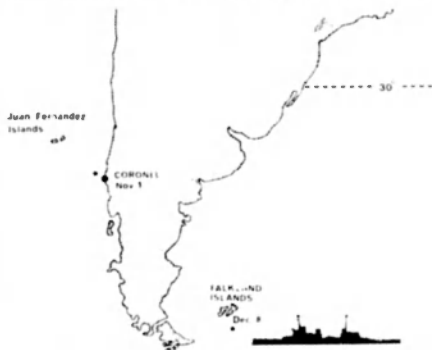
In those days INVINCIBLE was a dreadnought battle cruiser boasting eight twelve inch guns instead of Harrier aircraft and missiles though with a displacement and speed comparable to the present British carrier.

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 enemy ships. Arriving at the Falklands on 7 December 1914, they rendezvoused with five other cruisers as well as the old battleship CANOPUS and armed merchant cruiser MACEDONIA. Sturdee

## FALKLANDS AND THE INVINCIBLE — 1914

by ROBERT KENDALL PIPER



Location map of the Coronel and Falkland Islands.

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 reconnoitred ahead in what was planned as a swift 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 sky with maximum visibility. There was no rain, mist or storm in which the Germans might seek shelter and escape.



Vice Admiral Sir Doveton Sturdee.



German light cruiser SMS DRESDEN.

INFLEXIBLE fired the first closing shots at 1300 with INVINCIBLE adding her own firepower a few minutes later. Range had narrowed to sixteen kilometres. LEIPZIG was now the rearmost and slowest ship. She could not stand the increasing pace and was falling astern of the fleeing German squadron. No hits were obtained by the two dreadnought pursuers though LEIPZIG was lost to view as the giant shells shot up huge geysers of water about her.

Spee signalled for his three light cruisers to scatter and make for the South American coast while he, with the two armoured



SMS DRESDEN at Juan Fernandez before scuttling, March 1915.

cruisers SCHARNHORST and GNEISENAU, stayed and fought a rearguard action.

The battle now began in earnest with INVINCIBLE ranging on GNEISENAU and INFLEXIBLE on SCHARNHORST.

Sturdee, taking no chances, kept his dreadnoughts out of range of the enemies 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 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.

Shortly after three in the afternoon the pursuers noticed that the GNEISENAU had taken a list and the SCHARNHORST was burning at several points. The latter was first to go and turned over on her side at 1617 before sliding below the waves. Spee went down with his ship; there were no survivors.

Meanwhile the GNEISENAU refused to surrender and



SMS SCHARNHORST, lost in December 1914 at the Falkland Islands.

fought on gamely into the twilight. Finally she too heeled over on her beam ends. Remnants of the crew could be seen walking on the cruiser's side. Then suddenly the warship plunged below the waters of the South Atlantic to join her sister. Some two hundred of her complement of 850 were picked up though many of these were later to die as a result of wounds and prolonged immersion in the icy sea.

LEIPZIG and NURNBERG the light cruisers, were also to be 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 tender 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 GNEISENAU and Otto with the NURNBERG. A special German medallion was later struck depicting the three and commemorating their gallantry.

DRESDEN was eventually caught in March 1915 and scuttled by her crew at the Chilean islands of Juan Fernandez.

INVINCIBLE was lost in the Battle of Jutland (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 DERFLINGER and KONIG the



SMS DRESDEN sinking.

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- (b) Falsely represent that goods are new;
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dreadnought managed to inflict some damage on the opposition before succumbing. Rent in two after an internal explosion her stem and stern rose apart high out of the water before she settled.

There were only six survivors who clung to a life raft, most of whom had been in the control top.

In the first list of official battle honours, promulgated by the Admiralty in 1954, the seven Royal Navy ships involved in the action forty years earlier were finally awarded the battle honour FALKLAND ISLANDS 1914.

John Davis, an English navigator, in his ship *DESIRE* is thought to be the first to sight the now controversial Falkland Islands in 1592. Captain John Armstrong, also an Englishman, made the first recorded landing in 1690. He named the sound between the two main islands after Viscount Falkland, the British Navy's then treasurer. The name later came to refer to the whole group though the term *Las Malvinas* is in general use in South America.

However, the honour of the first settlement goes to the French and their famous navigator Louis Antoine de Bougainville. This was on East Falkland in 1764.

A year later the British, not to be outdone, moved onto West Falkland. Spain in turn bought out the French and drove off the English in 1770. War seemed inevitable between the two but at the last moment Spain agreed to return Fort Egmont and its port. Only four years later the English withdrew their naval garrison as an "economy" measure. Before departing a plaque was erected claiming sovereignty over all the Falklands for their country.

Things were to remain quiet for over three decades until neighbouring Argentina rose up successfully against Spanish control. By 1816 they claimed to succeed Spain in Falklands ownership and moved in four years later, installing their own governor at Soledad in 1828.

Another five years later (things moved slowly in those days) a British force peacefully sent the Argentine soldiers back home. In 1834 the then British Prime Minister was to state that they were

not prepared for "any other State to exercise a right as derived from Spain, which Britain had denied to Spain itself".

The present *INVINCIBLE* is the seventh British ship to bear the famous name. The first was a captured French vessel in 1747. Two others also of wood and driven by sail were launched in 1765 and 1808. These were followed by an armoured frigate and iron steam ship in 1861 and 1869 respectively. Sixth was the world war one *INVINCIBLE* which was launched in April 1907, costing the British taxpayer £1,752,000.

Nothing is new under the sun they say and indeed so it seems. The South Atlantic islands once again in dispute in 1982 and two proud nations' honour at stake. Economics dictate the extent of their actions and a British warship named *INVINCIBLE* a major participant. One can only reflect on the Falklands' turbulent past and guess as to its future; at the same time wondering whether the current aircraft carrier might survive longer than her World War One predecessor and under whose flag she might eventually serve.



HMS INVINCIBLE going down, 31st May, 1916.

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# NAVAL ROUNDUP

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## 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 de France for the helicopters.

Of the 18 helicopters, 12 will replace the RAAF's Iroquois  
UH-1B models of No 5 Squadron, Fairbairn, 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 \$23.598M 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 240  
nautical miles and a cruising speed of 121 knots. It is powered by a  
Turbomeca Ariel engine. Over 700 are in service in 23 countries.

The helicopters are to be delivered during late 1983 and early  
1984.

## LAUNCHING OF HMAS IPSWICH

The RAN's newest patrol boat, HMAS IPSWICH, 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 (NQE) of Cairns  
has the contract for the other 14. So far five ships built by NQE  
have entered service with the RAN. They are HMAS  
WARRNAMBOOL (March, 1981), HMAS TOWNSVILLE  
(July, 1981), HMAS WOLLONGONG (November, 1981),  
HMAS LAUNCESTON (March, 1982) and HMAS WHYALLA  
(July, 1982).

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



Westland Sea King helicopters fitted with THORN-EMI  
"Searchwater" advanced marine surveillance radar operating  
from HMS ILLUSTRIOUS which is now in the South Atlantic.  
The installation was completed in record time with performance  
in trials proving outstanding.



HMS ILLUSTRIOUS at the end of her successful sea trials,  
before sailing to the Falklands. Note the two single Phalanx  
CIWS adjacent to the Sea Dart missile launcher and right aft.  
(Photo — Royal Navy)

Oceans. After the war she was transferred to the Royal  
Netherlands Navy and subsequently to the Indonesian Navy.

## SEA KING WITH AIRBORNE EARLY WARNING RADAR NOW ABOARD ILLUSTRIOUS

An important new variant of the Westland Sea King has  
completed trials at Westland Helicopters Limited. Yeovil and two  
are embarked on HMS ILLUSTRIOUS for deployment to the  
South Atlantic.

Equipped with an advanced marine surveillance radar, the  
THORN-EMI "Searchwater", the new Sea King provides long  
range detection of aircraft at low and high altitudes as well as  
surface targets as small as submarine periscopes. This new  
capability was accomplished in only eleven weeks — an  
achievement not only made possible by close collaboration and  
intensive working by a joint Ministry of Defence, Royal Navy,  
Westland and THORN-EMI team. Flight trials have already  
shown that performance of the system is outstanding and exceeds  
expectations.

## FIRST STAFF MOVE TO DEFENCE ACADEMY SITE

Another stage in the establishment of the Australian Defence  
Force Academy took place on 20th September, when members of  
the Academy Secretariat occupied "on site" premises on  
Northcott Drive, Campbell, ACT.

The Academy Secretariat and personnel from the  
Department of Defence and Department of Transport and  
Construction moved from their present offices to the recently  
completed Academy stores building.

As well as the completion of the stores buildings and some  
siteworks, construction has begun on cadet accommodation, the  
library and sports fields and parade grounds. In addition, a  
number of buildings were currently out to tender, including the  
administration and military buildings, assembly hall, computer  
buildings and the indoor sports complex.

The Academy eventually will accommodate about 1200 male

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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 opens 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 between 29 August/7 September and in so doing became the first LCH to visit the West Australian naval base. The diminutive 323-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 Patrol 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, 2 July, 1981, to conduct the CPF contract definition phase of the program.

The \$2.6 billion program (1981/82 dollars) 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 deterrent force.

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

The CPF Program is expected to revitalise the Canadian shipbuilding and related industries by improving its expertise in the areas of naval ship design, systems integration and program management, as well as ship construction. The program should also provide about 300,000 person-years of employment to Canadian industry, including about 7000 person-years of shipyard labour over a ten-year period.

### 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 P3B Orions and four F111 aircraft from the RAAF; 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 as 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.

The new Port division will initially be limited to a total strength of 50 personnel, as it will be impracticable in the early stages to establish a full Division of approximately 200. By restricting early numbers it will allow the Darwin Port Division to achieve a graduated development based on a well-trained nucleus.

The Darwin Port Division will be the seventh to be established around the coast of Australia. The other six divisions, which were formed between the two World Wars, and which were reactivated in 1950, are based at Brisbane, Sydney, Hobart, Melbourne, Adelaide and Fremantle.

Mr Sinclair, in his recent Budget statement on Defence, acknowledged the importance of the Naval Reserve by providing for an increase in manpower while restricting the Permanent Naval Forces to no manpower growth.

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.



Two views of the fourth and last guided missile frigate now building for the RAN in the USA. DARWIN is slightly larger than the lead ships, the additional feet (aft) being designed for operating larger helicopters. (Photos — Lieut J. Straczek)

## NAVY HELICOPTER PROJECT TEAM TO VISIT MANUFACTURERS

A four-man electronic systems engineering team evaluating a short list of helicopters for use by the RAN left Australia on 16th October, 1982, for a three week visit to the contending manufacturers.

The team was to review progress of electronic systems designs at Sikorsky in the United States, Westland in the United Kingdom and Aerospatiale in France. The team, in reviewing progress of the electronic systems design, would be taking particular note of the potential of the systems to provide for future role changes by the subsequent addition of sensor equipment.

Led by the Navy Helicopter Project Director, Captain Tony Hunt, the team would comprise Lieutenant Commander D. J. Moorhouse, a systems specialist from Canberra; Mr Tony Gibb, a digital engineer from the Advanced Engineering Laboratory at Salisbury; and Mr John Robinson, a computer software engineer from Canberra.

Following the visit, the weapon and sensor specifications developed by the contenders would be assessed in the Department of Defence. These specifications would form the basis on which, early next year, the companies would be invited to tender for the supply of helicopters.

## NEW BARRIER REEF PASSAGE COULD SAVE MILLIONS

Royal Australian Navy hydrographic surveyors have discovered a new deep water passage through the Great Barrier Reef.

If developed the new passage will allow the more rapid deployment of naval vessels into the Coral Sea and could save millions of dollars a year in coal shipment freight rates to Japan.

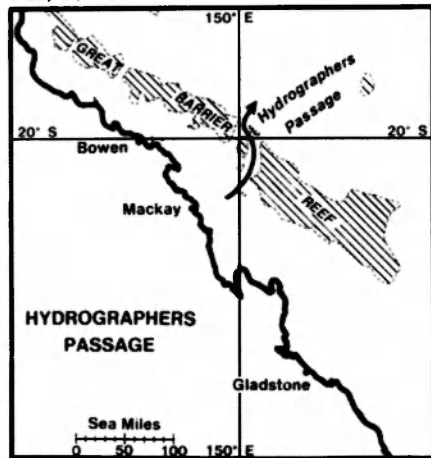
The discovery of the passage was announced in late October by the Minister for Defence, Mr Ian Sinclair, and the Minister for

Transport and Construction, Mr Ralph Hunt.

Mr Hunt said the Bureau of Transport Economics was undertaking a cost benefit study of the proposed passage to estimate how much money the new route would save shipping.

'The new passage has the potential of reducing a round trip from Hay Point, near Mackay, Qld, to Japan by as much as 520 nautical miles', he said.

'Preliminary investigations are also being carried out by the Department of Transport and Construction into the design of the navigational aids which will be required if the new route is developed', he said.



The new deep water passage through the Great Barrier Reef, to be known as Hydrographers Passage, which RAN hydrographic surveyors have discovered.

The decision to explore for a new deep water passage through the Great Barrier Reef was mooted 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 1975, the patrol boat, HMAS BARBETTE, carried out a reconnaissance of the area.

In 1976 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.

## NEW MINEHUNTERS

Two mine hunting ships of unique design are to be built for the RAN in Australia. Carrington Shipways Pty Ltd, of Tomago, near Newcastle, have been selected to build the ships, subject to the satisfactory conclusion of contract negotiations.

The vessels, built of fibreglass and with a catamaran hull, will be 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.

The selection of the Newcastle firm followed evaluation by the Department of Defence of proposals for the supply of the vessels from Australian companies. Long lead-time items worth more than \$28 million and including specialised mine hunting equipment have already been ordered for two prototypes. A total of \$12 million had been allocated for this project this financial year.

Delivery of the vessels was planned for mid-1985. A decision to proceed with production would be dependent on favourable results from a comprehensive trials and evaluation programme during which the effectiveness of the Australian-designed and developed vessels could be determined, as well as its vulnerability to pressure, acoustic and magnetic mines.

Subject to the satisfactory completion of trials of the two prototypes, this class should meet Australia's requirement for inshore mine hunting vessels for many years to come.

The initial 12 months of the ship building contract will be devoted to the development of a special ship building facility for the construction of fibreglass vessels at Carrington's existing premises on the northern bank of the Hunter River at Tomago.

Because of the materials to be used and the exacting construction requirements for vessels of this type, special ship building facilities, including environmental, temperature and humidity controls are needed. The hull of the catamaran is to be constructed from glass reinforced plastic inner and outer skins, with a thick layer of rigid foam sandwiched between.

At present the RAN's mine counter-measures force comprises two minehunters and one minesweeper. These vessels were acquired from the Royal Navy in 1962. Present plans are to develop and retain skills and capabilities for mine hunting, especially in the inshore waters of our harbours and their approaches.

In October last year the Government announced that it was considering the acquisition of two British Hunt class dual-role minehunters/minesweepers to complement the minehunter catamarans. After investigation, it has been decided not to proceed further with this proposal at this time. The Government has decided that a thorough review should be made of Australia's need for minesweepers to complement the minehunter catamarans. This review will cover all the options open, taking into account technological advances in mine counter-measures, and the cost-effectiveness of the solutions which might be available.

## BACKGROUND

The minehunter catamaran is an innovative Australian solution to a significant international defence problem. The high cost of overseas designed minehunters led the Navy to develop an alternative means of acquiring an acceptable mine hunting capability at significantly lower costs.

Mine hunting involves the detection of enemy mines by very accurate sonar. The mines are then destroyed with an explosive charge.

The catamaran concept has been selected because it provides a stable and more spacious working platform compared with a single hull ship of similar displacement.

The increased stability inherent in the catamaran permits the siting of the propulsion and power generation machinery high in the vessel, thus increasing the shock protection of vital machinery.

Fibreglass has been chosen as a construction material because of its non-magnetic properties. The magnetic, noise and shock requirements for the minehunter are very stringent. In fact, they were the principal factors in the choice of the hull concept, hull construction, equipment selection and systems design.

The very demanding operational requirements for these vessels will necessitate extensive testing and validation programs during ship building to ensure satisfactory operation in the extreme conditions of shock to which the ships may be subject.

When built, the minehunter catamarans will have an



Overhead view of the aft deck of the battleship USS NEW JERSEY in dry dock while undergoing refitting and reactivation. The ship is now on trials prior to recommissioning in 1984. (Photo — USN)

approximate overall length of 30 metres, a beam of nine metres and a displacement of some 170 tonnes. They will have accommodation for two officers and 12 sailors.

The minehunter catamaran will form part of the replacement force for the RAN's existing Ton Class mine warfare vessels, purchased from the Royal Navy in the early 1960s. The Ton Class vessels are planned to be paid off in the mid-1980s when they will be more than 30 years old.

Best wishes to all Navy Personnel, from . . .

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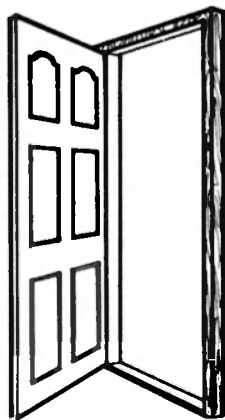
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### Combat Fleets of the World

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

REVIEWED BY  
ROSS GILLET

*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 1100 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 hundred lines.

Many of the ships are depicted through professionally drawn line drawings, most of which are keyed to indicate sensors and other equipments. As well as overall 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 addendas bring readers into the Naval scene through to 1st February and then to 1st March.

From Albania to Zanzibar, Combat Fleets of the World 1982-83 is a credit to the editor. It has given me many hours of reading, it costs less than the opposition and has me determined I will seek out the next edition, in 1984.

I strongly recommend Combat Fleets for the above reasons. It is required

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.

### CORVETTES

BY IRIS NESDALE  
Published by Iris Nesdale  
Price \$20

REVIEWED BY  
ROSS GILLET

*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 fates.

Highly recommended.

### British Warships since 1945 (Part 2)

By MIKE CRITCHLEY  
Published by Maritime Books  
Review copy from BMS Media Services  
PO Box 2131  
Wellington, New Zealand

REVIEWED BY  
ROSS GILLET

*Part 1 of British Warships since 1945 featured the Battleships, Air-*

## BOOK REVIEWS

*craft Carriers, Cruisers and Monitors of the Royal Navy.*

The second book describes in the same format, ie, brief statistical and career summaries, the submarines, depots, maintenance and repair ships.

The majority of the warships illustrated are the submarines, shown as built and as modernised during the 1950s and 1960s. Many 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 1948 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.

### Devonport built Warships since 1860

By LCDR K. V. BURNS, DSM, RN  
Published by Maritime Books  
Review Copy from BMS Media Services,  
PO Box 2131, Wellington, New Zealand

REVIEWED BY  
ROSS GILLET

*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 RAN ships are also allotted space including ENCOUNTER, J5, J7, PSYCHE.

Well worth the reading, recommended.



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CLEMENCEAU at Nice, July 1976.  
(Photo — French Navy)

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.



CLEMENCEAU heading a task force.  
(Photo — French Navy)

These two vessels are included in the BMS Pictorial History: "Aircraft Carriers and Aircraft-carrying Cruisers" and are reproduced by courtesy of Burgess Media Services Ltd, PO Box 2131, Wellington, New Zealand, the publishers.

VITTORIO VENETO seen off Taranto in 1978, escorted by the guided missile destroyer ARDITO and the frigate LUPO.

(Photo — Italian Navy)



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# NOTT THAT MAN AGAIN

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 League of Australia, dedicated as it is to bringing to public attention the importance of maritime defence and the dangers of its neglect by Australia.

That lesson concerns the British Secretary of State for Defence, Mr John Nott.

Our sister magazine "SEAPOW" 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 to be militarily strong — and to be willing to use its strength for the defence 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 control."*

*"There is no bargain basement way to defend oneself against aggression. Wishing and hoping for a perfect world, or structuring one's forces in accordance with what is 'affordable' rather than what is militarily effective, is the surest way to military disaster — 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, both 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 massive additional defence expenditure in the cost of the Falklands War, an additional expenditure which could have covered the retention in operational service of a large number of ships and aircraft which Minister Nott planned to pay off.

Minister Nott committed the penultimate error for a Minister of Defence — he abandoned de facto the principle of the deterrent on his nation's flanks. In so doing he contributed very

by A W GRAZEBROOK

substantially to his country's involvement in a War. There is only one worse error a Defence Minister can conceivably make — getting his country into a war and then losing it.

It appears beyond doubt that Minister Nott ignored the advice, given after the most detailed analysis and careful thought, of Britain's most able and well qualified professional maritime defence advisers.

Very reliable sources state that Minister Nott had drawn to his attention by then Navy Minister Keith Speed (prior to his resignation) the threat of Russia's maritime strength to NATO's flanks. Why, it was asked, would Russia launch a massively expensive land attack in Central Europe when she could do such damage by attacking NATO trade both in and outside the formal NATO maritime zone?

Allegedly, Minister Nott's response to having these facts drawn to his attention was "Keith, I just don't want to know."

Navy Minister Speed perceived the extent of Minister Nott's miscalculations, expressed his convictions in an appropriate manner and accepted political eclipse on a matter of principle.

Even the most short sighted observer will accept the importance not only of the maritime jugular vein, but also the maritime flanks of NATO's trade. These flanks have to be protected by maritime forces, including aircraft carriers, of the very type that were prominent amongst those which would have deterred Argentina.

Within five days of taking office as Secretary of State for Defence, whilst he was in Bermuda, Mr Nott endorsed a reduction in his country's maritime forces. A series of "studies" followed and in late June the British Parliament was informed of the actions taken. The resultant outcry was inevitable.

In the circumstances, it was quite wrong for Mr Nott to make such a fundamental decision so quickly and it was extremely fortunate for Britain that the measures he ordered had not been fully implemented by the time Argentina invaded the Falklands Islands. The repercussions on NATO if Britain has been unable to mount a recovery

operation or had lost the actual battle hardly bear contemplation.

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 1694, Issue 12/1981, the interviewer commented on Minister Nott's admission that the number of destroyers and frigates in the British Navy have been fairly 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 impertinence."

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

- The questions reflected a deep concern on the part of men very 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 the 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 miscalculations, which have a serious adverse effect on other members of that Alliance, to go unremarked and uncriticised throughout that Alliance.

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

The Navy League of Australia should learn the lessons of Minister Nott's miscalculations and apply these lessons to the pursuit of the League's objectives by invoking the principle of the deterrent. 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" in the short term, that those Ministers' errors of judgement or negligence will be ruthlessly exposed.

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# NAVY LEAGUE DIVISIONAL & CADET NEWS

## VICTORIA

*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 Koorlong 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 Hawihome 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 boatshed at Lake Hawihome 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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## THE NAVY LEAGUE OF AUSTRALIA Application for Membership

The people who read The Navy magazine will already have an interest in the sea or some aspect of maritime affairs; some will be interested in the Royal Australian Navy and naval events in general, others in sea cadet training and activities. A minority of readers will be 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 sizeable group of citizens, a mixture of young and not-so-young people, of highly qualified professionals and imaginative "amateurs", all keen to contribute 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 maritime 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 the exchange of cadets for training purposes.

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APRIL, 1983

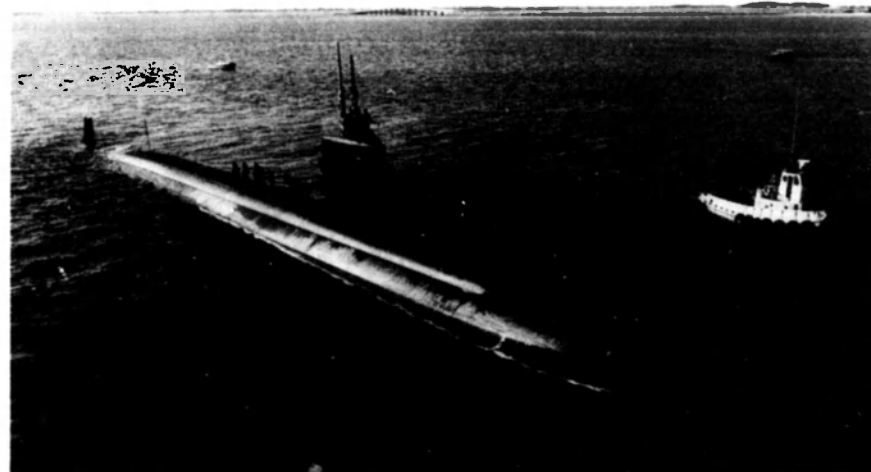
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The United States Navy nuclear-powered submarine USS LOS ANGELES arrived at HMAS Stirling in Western Australia for a six day visit on 20th January. This 6000 tonne nuclear-powered submarine was the first to visit the base for rest and recreation purposes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

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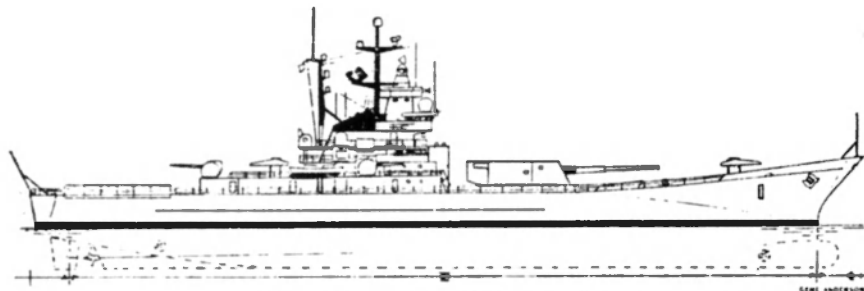
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## FRONT COVER

Raised from the depths after 70 years, the Royal Navy's first submarine, HOLLAND 1. (Photo — Navy News).

## CONTENTS

The Return of the Big Gun to Blue Water	2
A Welcome Return	4
Midwar Destroyers of the USN	7
Letters to the Editor	12
Naval Roundup	13
Out of the Past	19
Book Reviews	12, 20
RAN Participation in Coastal Surveillance	23
The Gun — Is It Still A Required Weapon?	27
Submarines Galore	28
USS OLYMPIA	31
Further Reflections on the Falklands and INVINCIBLE, 1914	35
D Class Cruisers in New Zealand	39
Navy League Divisional and Cadet News	40



The BBL (Light Battleship) design. (Drawing — Gene Anderson)

## The Return of the Big Gun to Blue Water

by SHTANDART

**S**OME 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 1 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 anti-missile system and the "Tomahawk" and "Harpoon"

missile systems. At least two of the remaining three "Iowa" class BBs are due to follow the "New Jersey" back into service.

For many people, ships such as these are hypnotically fascinating. Even by today's perverted standards of mass destruction, the gun-power alone of these platforms is truly awesome, and their broad armoured hulls push through the sea with that ponderous grace beloved by all those with an eye for beauty afloat. The United States of America was one of the first nations to build "Dreadnought"-type battleships and the "Iowa" class were the last of their kind to be put into service. They are now the last active battleships in existence anywhere.

Phase 2 is scheduled to involve, amongst other tasks, the

removal of No 3 (aft) 16-inch turret and the possible addition of abbreviated flight-deck facilities for V/STOL aircraft operations involving the McDonnell-Douglas AV8-B. It is the possible future of that No 3 turret that interests us here.

The November 1982 edition of the United States Naval Institute magazine "Proceedings" contains an article which proposes a startling use for these three possibly surplus turrets. The author of the article, a naval architect, envisages a new class of vessel, viz, the Light Battleship (BBL) which would put back to sea, one each in three 9000-ton hulls, all three surplus 16-inch turrets to be mounted forward of the superstructure. It is intended by the author that these vessels would restore to the US Navy what he (and admittedly others) contends to be a lamentable lack of heavy firepower for shore bombardment. In addition to the single main turret it is proposed to mount three or five 5-inch 54-calibre gun mounts disposed as one or two on either beam with the remaining mount emplaced on the centre-line facing aft.

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-borne 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 system being entirely designed by SIGNAL of Holland.

The armoured hull of the 9000-ton BBL would have a length of just over 400 feet, a beam of 84 feet with 22 feet draft, and a bulbous bow. Twin screws and 25,000 HP diesels should propel this package at 22-25 knots complete with a crew only 100 or so greater than the "Oliver Hazard Perry" frigates.

If anything like a conventional ship-to-ship contest develops in a future war, there appears to be nothing either existing or projected in the Soviet Fleet inventory which could survive a rude artillery encounter with a heavily armoured BBL. Newer armouring 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 approach closer to shore than the "Iowas" during fire support operations, and where exceptionally high-risk operations involving armoured gun-ships are concerned, it makes greater sense to utilise the semi-expendable lightly-manned BBL than a high-value BB. This would make even greater sense if the 16-inch guns were provided with Rocket-Assisted Projectiles which extend the useful range to 50 miles.

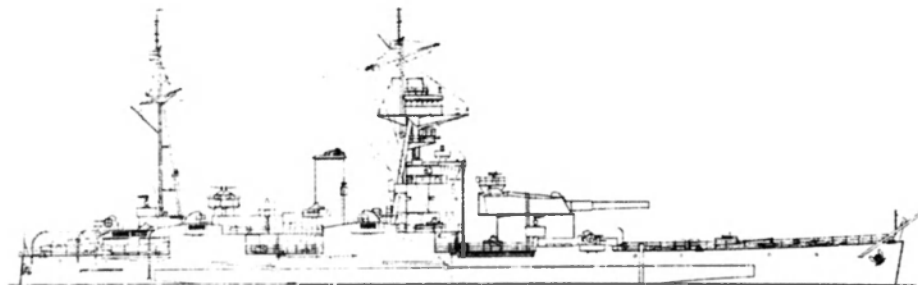
The BBLs would have the speed, range (with diesels) and size to make ideal flag/command ships for either invasion fleets or convoys. Lastly, because their armament does not have to be designed (let alone built) and that the remainder of the vessel is largely conventional, they would be inexpensive vessels to build and maintain. Never were these virtues more appreciated than in these days of almost universal impecuniousness.

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 cast his mind back to April 26, 1941 when HMS "Abercrombie" was laid down. She displaced 9717 tons, was 373 feet o.a. and possessed a breadth of 89 feet and a 14 feet draft. Her armament consisted of two 15-inch guns in a single turret placed forward and eight 4-inch guns in four twin turrets placed two on either beam, plus smaller weapons. Propulsion was by steam turbines driving twin screws for 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 Service in two world wars and known generically as "monitors". (Only the Italians built a similar ship. The "Faa di Bruno" displaced 2800 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 2½ knots. She survived to provide Genoa 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 guns, triple-expansion steam engines, 7½ knots) did not survive an encounter with the battlecruiser "Goeben" (ten 11-inch guns). However the basic concept of the monitor design, i.e. to get battleship armament to sea purely for bombardment purposes in an expendable cost-effective hull, actually worked quite well.

The BBL concept would take the basic idea forward to its logical conclusion. Whilst both the original and current hull designs incorporated substantial blister protection, this would be enhanced in the BBL by equally substantial vertical and horizontal armour protection, and a triple bottom. A novel addition would be fore and aft positioned side-thrusters which would ensure accurate positioning for bombardment purposes as well as providing assistance during normal berthing operations. A high, flared ship-type bow would complete the general hull form.

When one includes powerful, economic engines and a good turn of speed, the BBL would be that which the monitor wasn't, i.e. a quite fast, dangerous and well-protected warship which is conceptually more than HMS "Abercrombie", but less than the late lamented "Graf Spee".



HMS ABERCROMBIE; the similarity between the monitor and the BBL is obvious.

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## A Welcome Return



Berthing alongside the overseas passenger terminal. (Photo — P & O)

Four RAAF Mirage Jet fighters swept over Sydney Harbour on Wednesday morning, 22nd December, as P & O's Canberra sailed towards her berth at Sydney Cove.

The fly-past marked part of Sydney's welcome to the 45,000 ton cruise ship at the end of her first liner voyage since her safe return from the Falklands War. During 94 days in the Falklands task force, CANBERRA sailed a total of 27,187 miles. She played many roles, principally as a troop carrier, but also as a front line assault and hospital ship and as

a prisoner transport. CANBERRA also provided many needs to other vessels, becoming the mother ship of the task force.

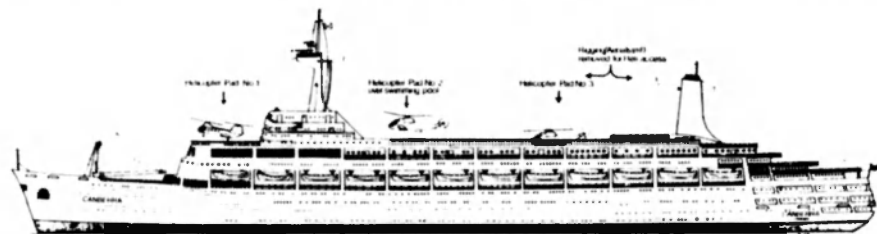
Her most dangerous moments came on 21st May, when she came under air attack for some ten hours while lying in San Carlos Water to disembark troops. Happily the ship escaped damage, the courage of the volunteer crew at that time earning for the ship a deep loyalty from the embarked forces who gave her 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 sur-

vived 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 Islands.

Following her tumultuous welcome in Southampton on her return from the Falklands, the helicopter pads were removed and the liner restored to her normal role as a cruise ship.

Captain Scott-Masson, who was awarded the CBE for his part in the Falk-



CANBERRA as converted for naval service. Note the three helicopter pads. (Photo — P & O)

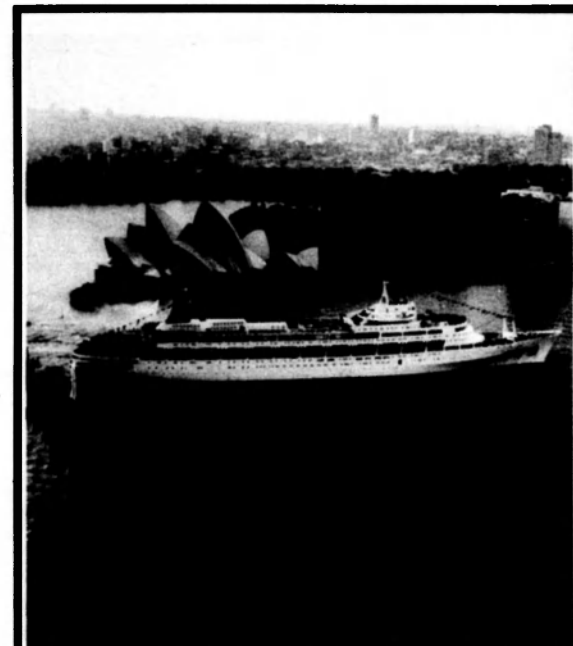
lands War, commanded CANBERRA into Sydney. Sydney Water Police escorted CANBERRA up the Harbour and a Maritime Services Board firefloat greeted her as she approached the passenger terminal. Two thousand balloons were released as CANBERRA passed Sydney's magnificent Opera House, where 150 guests of P & O Cruises attended a champagne breakfast. Guest of honour for the arrival was Dame Pattie Menzies, who launched CANBERRA on 16th March, 1960, at the Belfast shipyard of Harland & Wolff. Together with the late Sir Robert Menzies, Dame Pattie made several voyages in CANBERRA between Australia and England.

### Conversion Details

The conversion of CANBERRA was minimal by many standards, but extremely impressive in the speed and efficiency with which it was performed. The ship was due in at 0700 on the Wednesday, and even as she came alongside, work was already underway on her new helidecks.

The steel for these decks came from Scotland early in the morning of the previous day, and went straight into Vosper's No 1 fabrication shop where work started as it was unloaded. However, the job did not go off without hitches, as it was found that when the deck was completed, it was too large to get through the doors of the workshop! However, such trivialities were no problem to Vosper's. They simply cut the front off 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, platers and caulkers sailed with the ship in order to complete the work; with the intention of disembarking at Ascension Island.



CANBERRA manoeuvring into Sydney Cove on 22nd December, 1982. (Photo — P & O)

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 too.

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## Midwar Destroyers of the United States Navy



USS "DEWEY", DD349, a unit of the "Farragut" class, showing early wartime modifications. No 3 gun has been landed, and extra close range weapons added. Photo taken 1st December, 1942.

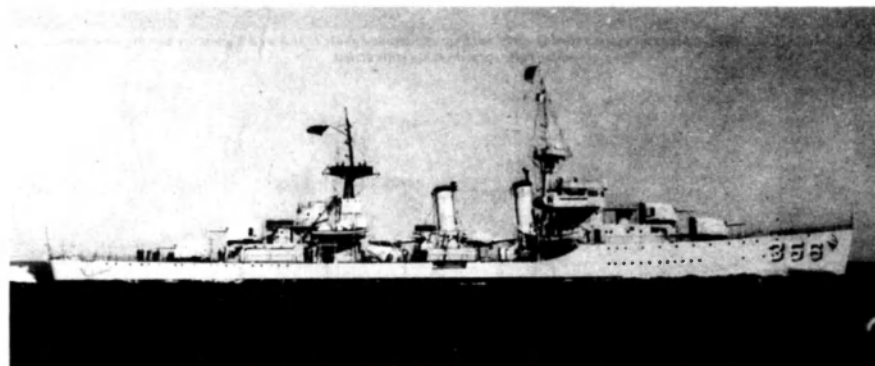
Between the years 1922 and 1932 there was a complete lack of destroyers built in the United States due to the large number of "four pipers" still on hand. When new construction eventually got underway again with the "FARRAGUT" class, an entirely new type of ship appeared in the fleet.

The "FARRAGUTs" 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 reintroduced 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 develop-

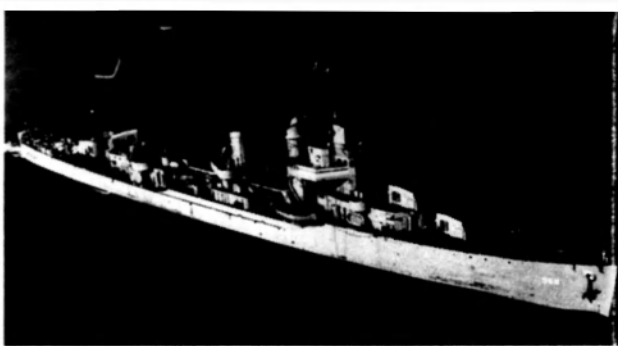
ing 42,000 SHP and could attain the designed 36½ knots without any trouble. Six hundred tons of oil fuel carried gave them a range of 6000 miles at 15 knots. It should be remembered that American destroyers were designed for Pacific operations, where long range was essential. As far as British ships were concerned, they were designed with an eye on North Sea work, the ships being able to be maintained 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



USS "PORTER", DD356. One of the large 1800 ton leaders, showing profile "as built". This shot was taken 25th July, 1936, when the ship was undergoing full power trials.

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 on close range weaponry, 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 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.



USS "McDOUGAL", DD358, a "Porter" class leader. Photo taken 12th August, 1942, showing early modifications. The after control position has been removed, together with main mast, bulwark extended to abaft the after funnel, twin 40mm's added.

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



USS "DUNLAP", DD384, "Mahan" class, showing early wartime appearance. Note that X and Y guns are not in gun houses, three quadruple torpedo tubes still carried.



USS "SELFRIDGE", DD357, "Porter" class, showing final appearance. B turret replaced by quad Bofors, X turret replaced by single dual purpose mount, bridge reduced in height. Photo taken 10th April, 1944.



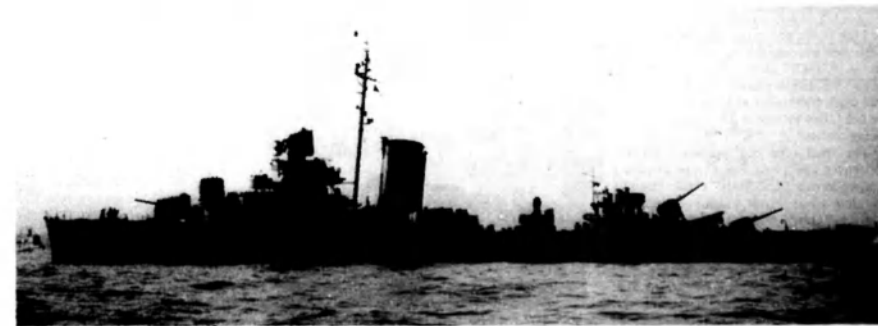
USS "MAHAN", DD364, taken 21st June, 1944, showing final appearance. After control position removed, replaced by twin 40mm's port and starboard. Full outfit of torpedo tubes retained.

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,



USS "LANG", DD399, "Craven" class, taken 26th May, 1942. In this ship Y gun is in an enclosed gun house, whilst X is in an open topped shield. The canvas weather cover gave the impression that X mounting was fully enclosed.



USS "CRAVEN", DD382. One of the 16 tubed destroyers with single funnel. Bulwark extends only as far as the forward tube bank. After guns in open mounts. Taken 24th November, 1943.



USS "BAGLEY", DD386. Appearance as at 28th April, 1944, showing the large uptakes required to connect three boilers to a single funnel.

and, even under full load conditions could still be very impressive.

As far as the single funnel type went, probably the five ships of the "SOMERS" and "SAMPSON" classes were the acme. In these vessels eight 5"/38s were carried in four twin mounts, plus either nine or twelve torpedo tubes. The "SAMPSONS" carried their tubes in triple mounts, whereas the "SOMERS" class were fitted with quads.

As with the preceding classes, wartime modifications saw an increase in close range weaponry, and a reduction in main armament. One item permanently removed was the four barrel 1.1" machine gun mounting. This was a good gun in its final stages, but not particularly liked when first introduced. It was fitted in the earlier units of the war built "FLETCHER" class, but after the end of 1942 it was rarely seen in destroyers. On the other hand, the twin and quadruple 40mm mountings were very well received, some ships of the destroyer type mounted up to sixteen 40mm barrels.

One big improvement was the adoption of high boiler pressures and temperatures, with their accompanying economy in fuel. In the "SIMS" class, which had risen to 1620 tons displacement, and 2475 tons at full load, 6000 miles at 15 knots could still be held, but with only 475 tons of oil fuel being carried.

The final type of "pre-war" (WW2) destroyer was a two funnel type generally known as the "BENSON" class. Actually divided into four main types, ie "BENSON", "LIVERMORE", "BRISTOL" (first group) and "BRISTOL" (second group), there were very few differences in appearance. The original "BENSON" class carried five 5"/38s with two forward and three aft, but later units settled on four mounts, two forward and two aft. The torpedo armament was increased to ten with the

introduction of the quintuple mounting. A very big identification point was the widely spaced funnels, due to the unit machinery system. This system was so successful that it became the standard for US destroyers.

As had occurred with the earlier "boats", wartime modifications soon became the order of the day, many ships losing one torpedo tube bank to make way for the ever popular twin 40mm mountings. As a general rule, the "BENSONS" had flat sided funnels, the others had round stacks. The original members of the class were built in peace time, and were fitted out with the usual ship side scuttles, but later ships were plain sided as air conditioning became standard. With the "BRISTOLS" (which were ordered

after the war in Europe had got into full swing), the first group had round funnels, and the second group flat stacks. The second group also had their director mounted a deck lower than the earlier types. There were a few variations in the bridge structure in some ships, but to be quite frank, it was hard to pick the difference at any distance at all. In 1944, 24 of the "BRISTOLS" were converted to high speed minesweepers, in which case the torpedo tubes and Y mounting were removed, to make way for the minesweeping winch and davits required for their new roll.

In the "BENSON" and "LIVERMORE" classes, only the forward gun houses were fitted, the after guns being carried in sided mounts that were open

topped. Canvas weather covers were fitted, and with these in place the after guns appeared to be in gun houses. The "BENSON" class, and its successors, were very handsome ships, presenting a pleasing profile. A notable feature in all four groups was the rounding off of the fore'sle deck, very similar to the old and beautiful British "S" boats. As was standard practice in US destroyers with raised fore'sles, a low bulwark ran from the break of the fore'sle, and in the case of all four groups, this bulwark ran to well abaft the after stack, adding to the appearance.

By the end of the Second World War, the armament of all four groups had standardised to four 5"/38s, five torpedo tubes, two twin 40mm, and up to ten 20mms. There were of course odd ships that did not receive all the modifications, but in the main the re-armament went according to plan. Complements varied slightly, but if the "FARRAGUT" and "BENSON" classes are taken as yardsticks we find that the original 1932 designed ships carried 160 officers and men in peace and 250 in wartime, whilst the war complement for the "BENSONS"

was 276. In peacetime the "BENSON" class was authorised to carry 191 all ranks.

With the US entry into the Second World War, the new "FLETCHER" class became the standard fleet destroyer, reverting again to the flush deck design. The last of the "BRISTOLS" were launched in February, 1943, and future construction centred around the "FLETCHER", "SUMNER" and "GEARING" types.

After the end of the war, the old pre-war destroyers were paid off, and all but the "BENSON" variants were sold. The "BRISTOLS" were retained for quite some time, and many were turned over to 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 raised fore'sles were designed around the excellent 5"/38 gun and its wonderful director. They could stand a lot of punishment, especially in the "BEN-

SON/BRISTOL" type, where some ships received very severe damage and survived. An illustration of this was in the case of USS "KEARNY". The ship was hit by a German torpedo in the forward boiler room, the same place and position as Mountbatten's "KELLY". In "KEARNY's" case, the ship was able to make port with a decided list, but under her own power. On the other hand, "KELLY" was towed with her decks almost awash. It was the "KEARNY" incident that influenced the Admiralty to adopt the unit system for the "Weapon" and "Daring" classes.

To gauge the numbers of ships involved in this period, no less than 72 of the "BRISTOL" class were built, 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.

(All photos USN — courtesy A D Baker III)



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, bulwark extends to the main mast.



USS "GLEAVES", DD423. "Benson" class. Appearance as at 13th April, 1943. No 3 mounting omitted, after tube bank replaced by two twin 40mm mounts, after control station reduced in size.

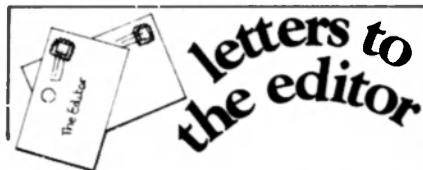


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The Editor,  
THE NAVY  
Dear Sir,

16th January, 1983

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

Very few Australians know that Admiral Sturdee's destruction of the German Pacific Fleet at the Falklands on December 8, 1914, was achieved by the Admiralty's use of the German Naval Code Book seized by the late Captain John Tracey Richardson RAN (District Naval Officer, Victoria) from the German Merchant Vessel HOBART, inside Port Phillip Heads, on 11th August, 1914. (See pages 46 and 381 of "OFFICIAL HISTORY OF AUSTRALIA in the WAR OF 1914-18", and page 29 of Admiral Sir Wm James's book "THE EYES OF THE NAVY".)

Yours faithfully,  
R. S. VEALF,  
Commander RANR, Retd.

16th January, 1983

The Editor,  
"THE NAVY",  
PO Box 653,  
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



## RED NAVY AT SEA

*Soviet Naval Operations on the High Seas, 1956-1980*

by BRUCE W. WATSON

Price \$35

Publisher, Arms and Armour Press, 245 pages

This book is essentially an analysis of Soviet naval deployments, an interpretation of the motives behind such deployments and how they relate to the Soviet's overall grand strategy.

The author sets the broad scenario with an introductory description of "The Development and Purpose of the Soviet Navy". He then proceeds to analyse Soviet operations in the Atlantic, Pacific and Indian Oceans and the Mediterranean Sea and concludes with a forecast of possible future trends. Attention is focused naturally enough on the Atlantic and Mediterranean theatres with specific events such as the Suez Crisis and Arab-Israeli conflicts receiving more detailed coverage. A series of tables detailing individual naval port visits and ship days in port rounds off the author's presentation. Australia features only at

"THE CARRIER SWITCH" in the January issue of THE NAVY. Serving officers, of course, are inhibited from expressing their opinions, in print, about the volte face of the Defence Force Development Committee, in relation to the acquisition of an aircraft carrier.

One's mind reverts to September, 1975, when the Whitlam Government scrambled the Defence egg, confident in the knowledge that whether or not Labor would be in Government, it could continue to influence Defence policy-making by placing the civilian element in the Department of Defence superior to the "Service" officers.

As I predicted in the Melbourne "AGE" of 24th January, 1976, "verily, the pen has become mightier than the sword" in the Defence Department".

Yours faithfully,  
R. S. VEALF,  
Commander, RANR, Retired.

17th February, 1983

The Editor,  
"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.

## BOOK REVIEW

the periphery in these tables with a total of two naval visits, both of which were to Cairns in the period 1972-74.

Recommended reading, particularly to those with an interest in global or maritime strategy.

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# NAVAL ROUNDUP

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## PATROL BOATS FOR INDONESIA



HMAS BOMBARD (Photo — RAN)

*Australia will provide Indonesia with two additional Attack class patrol boats as part of the Defence Co-operation Programme between Australia and Indonesia.*

Speaking in Surabaya on 27th January, Australia's Minister for Defence, Mr Ian Sinclair, who was making his first visit to Indonesia as Defence Minister, said: "The estimated total cost of the package is A\$4 million and brings to five the number of vessels provided under the Defence Co-operation Programme.

"These vessels will provide additional support for the Indonesian Navy's coastal surveillance, fishery protection and anti-smuggling activities.

"Two Attack class boats with a full support package were initially provided to the Indonesian Navy in 1973 and 1974.

"Following an Indonesian request, one further patrol boat was handed over on 22nd April, 1982, and a further two will be provided during 1983.

"The two patrol boats, HMAS ACUTE and HMAS BOMBARD, will become surplus to RAN requirements with the commissioning of new Fremantle class vessels," Mr Sinclair said.

## WILLIAMSTOWN TO BID FOR FRIGATES

*Williamstown Naval Dockyard in Victoria is to submit a proposal for the construction of two new frigates for the Royal Australian Navy.*

Announcing this in December, the Minister for Defence, Mr Ian Sinclair, and the Minister for Defence Support, Mr Ian Viner, said the two ships would be based on the design of HMAS DARWIN, the RAN's fourth FFG class ship, currently being built in the United States.

The Ministers said that the Request for Proposal (RFP) followed the implementation of comprehensive management reforms at the dockyard and the acceptance by the work force of a package of improved work practices negotiated with the assistance of the ACTU.

"The dockyard is required to respond to the RFP by the end of February," the Ministers said.

"Its proposals will then be evaluated by the Department of

Defence in much the same way as proposals received from privately owned companies are evaluated.

"This procedure has been adopted to help in establishing a customer-supplier relationship between the Navy and the dockyard as recommended by the committee chaired by Mr R. J. Hawke which enquired into the operations of the dockyard last year."

The Ministers said that evaluation of the dockyard's response would form part of an overall assessment by the government as to whether it should proceed with the construction of the frigates at Williamstown. Another factor which would be considered was the success of the new management arrangements and improved work practices in increasing productivity and efficiency at the dockyard.

It was planned that a decision on the construction of the ships at Williamstown would be made in the second half of 1983.

## FLYING GUARDIAN

*Israel has accepted delivery of its newest patrol boat, a hydrofoil built by Grumman Aerospace Corporation.*

The SHIMRIT (Guardian) is an 84-foot, all-aluminium craft displacing 100 tons. It was built at the Lantana (Florida) Boatyard and underwent sea trials off Florida's east coast. When foiborne, as shown here, the SHIMRIT is powered by a gas turbine engine and can reach speeds of up to 30 knots (about 57 mph). The hydrofoil is much faster than a conventional boat when "flying" on its foils because the hull rides above the waves, which reduces the water's drag on the boat. The SHIMRIT will enter operational service with the Israeli Navy at Haifa, Israel.



SHIMRIT (Photo — Grumman)



Formerly Darwin-based, HMAS ADROIT replaced its sister ship HMAS ACUTE as the WA-based patrol boat in a brief ceremony at HMAS Stirling on 21st January. During the ceremony the two Attack class vessels changed crews and HMAS ACUTE's two black swan funnel logos were transferred to HMAS ADROIT. HMAS ACUTE has been based on the west coast since it commissioned in 1968 and prior to 1978 was manned by the Fremantle Port Division of the Naval Reserve. It sailed for its new base at Darwin on 24th January. HMAS ADROIT will itself be replaced by another sister ship, HMAS ASSAIL, mid-year and will then transfer to the Fremantle Port Division of the RAN Reserve. Pictured is HMAS ACUTE (left) and HMAS ADROIT prior to the transfer ceremony in the HMAS Stirling small boats harbour. (Photo — LSPH Steve Given, RAN)



The HMAS Stirling-based hydrographic survey ship HMAS MORESBY sailed on 10th January from its home-port bound for the Esperance area in southern waters. Commanded by Commander Phil Hardy, the 2530 tonne MORESBY returned to HMAS Stirling in late February for a short visit before leaving for northern waters. (Photo — LSPH Steve Given, RAN)

## 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 Saturday, 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 patrolling 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, led by the nuclear powered aircraft carrier, 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-26th 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 Beacon South, 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 Lancelin 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 October, 1982. The Minister for Defence, Mr Ian Sinclair said on 14th January. The strengths of the individual services were: Navy 17,450, Army 32,843 and Air Force 22,672.

## COMMISSIONING OF HMAS SYDNEY

The RAN's third guided missile frigate, HMAS SYDNEY, was commissioned on schedule in Seattle, USA, on 29th January.

Announcing the event, 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 Sutherland; 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



USS ENTERPRISE, 1982, following her service life extension. Note Phalanx guns on port bow sponson and on the starboard beam adjacent to the island structure. A Sea Sparrow missile system is mounted on the starboard bow sponson. (Photo — USN)



for the RAN would be installed, and any defects located in trials would be rectified.

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 Lloyd's Register of Shipping. Neither investigation had brought to light any evidence as to the identity of the person or persons responsible for starting the fire, nor did they provide a basis for a claim by the Commonwealth for the reimbursement of the cost of repairs.

Mr Sinclair said that while the cost of repairs had not been finally calculated, it was expected to be about \$5 million.

It is planned that HMAS SYDNEY will arrive in Australia in February, 1984.

## 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 14th 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 HS 817.

The Royal Australian Navy ordered ten Mk 50 Sea Kings in 1973 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 troop transport, vertical replenishment and internal/external freight carrying. The helicopters will operate at an all-up weight of 21,000lb and are powered by two Rolls-Royce Gnome H1400-1 engines.

## RAN FLEET WEAPON TRAINING PERIOD A SUCCESS

*The largest concentration of Australian Naval units seen for many years, totalling 21 vessels plus aircraft of the Fleet Air Arm, took place off the New South Wales coast, east of Jervis Bay, during February and March, 1983.*

The activity was the first in the series of exercises throughout 1983 designed to carry the Fleet to a high peak of operational readiness in preparation for major joint exercises later on.

Ships' companies and aircrew were integrated into a fully worked up state under the supervision of the Fleet Commander

and his Warfare Staff. Units of the United States Navy and Royal Australian Air Force also participated. Exercises included anti-air warfare using missiles and guns, ship to ship engagements, naval gunfire support of simulated land forces, anti-submarine warfare, as well as underway replenishment, damage control and fire fighting evolutions along with mine countermeasures.

The exercises began with the departure from Sydney of missile frigates and destroyers on Monday, 7th February, and apart from normal complements carrying between them 80 midshipmen under training. Climax of the first part of the exercises was the arrival of 21 ships, plus the nuclear-powered submarine USS SEA DRAGON, at anchor in Jervis Bay between the afternoon of Saturday, 12th February and the morning of Monday, 14th February.

Throughout the exercises, Skyhawk strike fighters, Sea King helicopters, Tracker anti-submarine aircraft, Macchi jet trainers and HS 748 support aircraft of the Fleet Air Arm were in full use. Culmination of the weapon training period was the impressive Fleet entry into Sydney between 1.00 and 3.00 pm on Friday, 18th February.

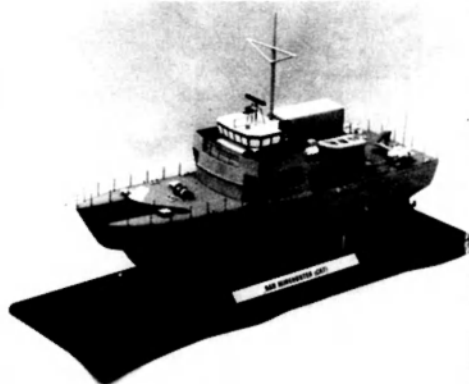
## NEW MINE WARFARE SHIPS

*The announcement has now been made of a \$23 million contract, awarded to Carrington Slipways 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 Ramsay Fibreglass Australasia, a division of Carrington Slipways Pty Ltd.

The selection of the Newcastle firm followed valuation by the Department of Defence of competitive proposals for the supply of these GRP vessels from Australian companies. A decision to proceed with production vessels would be dependent on favourable results following an extensive trials and evaluation programme during which design effectiveness and capabilities of the prototype vessels would be determined.

Modern mines, particularly pressure mines, demand the use of sonar and highly trained minehunter crews to search and detect them. Once identified, they are detonated, using a charge placed by a remote control submersible vehicle. Advantages of the catamaran minehunter over conventional vessels include good stability for the size of the craft, large deck space, wide beam with consequent wide separation of the propellers for increased manoeuvrability and design aspects which reduce magnetic, acoustic and pressure signatures.



*The new minehunter catamaran. (Photo — RAN)*

The design has been developed by the Naval Design Branch of the Department of Defence. It is uniquely Australian 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.

## OLD BOAT RAISED

*After almost 70 years in a watery grave, Holland 1, the Royal Navy's first submarine has been raised and docked at Devonport Dockyard, Plymouth.*

The 19m long submarine was lost when she sank on her way to a breaker's yard in 1913. She was found again when the minehunter HMS BOSSINGTON identified the wreck off the Eddystone Lighthouse.

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

Work began immediately on the preservation of the hull. Waterblasting cleaned off marine growth from inside and outside. Following the preservation work, Holland 1 will be cut into three sections for transportation to her final resting place, the Royal Navy Submarine Museum at Gosport.

Holland 1 was launched at Vickers, Sons and Maxim shipyard in north-west England on October 2, 1901.

She was crewed by two officers and six ratings but often carried one or two more ratings for training.



*HOLLAND 1 (Photo — Navy News)*

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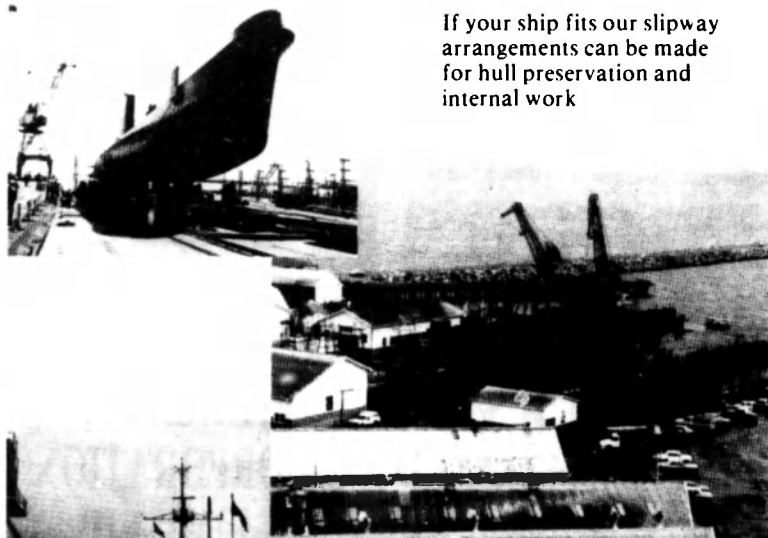


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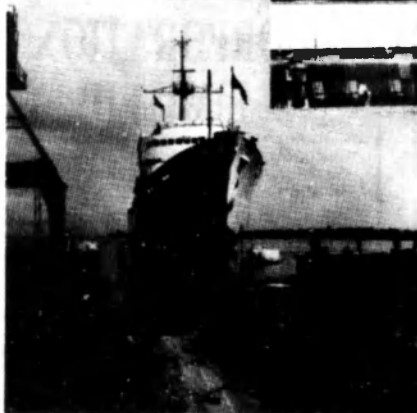
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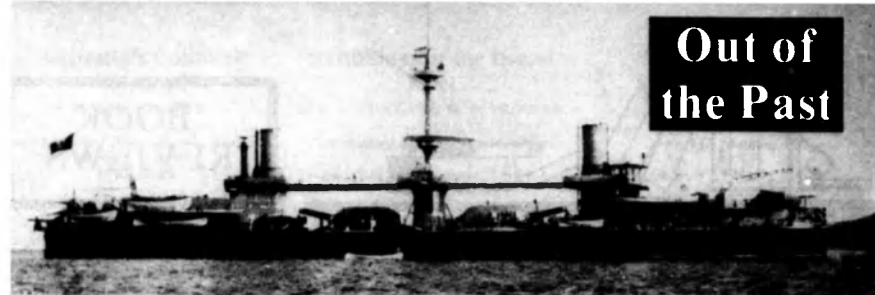
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## Out of the Past



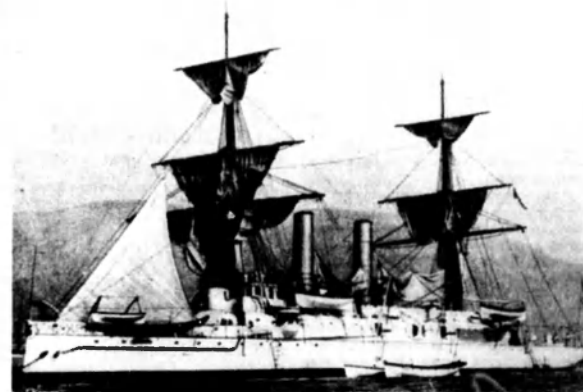
ANDREA DORIA. (Photo — BMS Photo Collection)

by MICHAEL BURGESS

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 floating battery GR104 at Brindisi until after WW1 when she was relegated to the role of an oil depot 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 training ship for the Oregon Naval Militia. She was receiving ship at Yerba Buena from 1918 to 1916 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 interest-



USS BOSTON. (Photo — BMS Photo Collection)

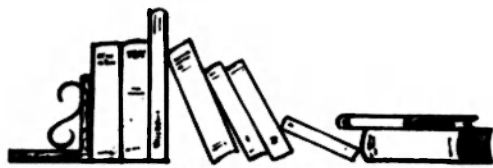
ing-looking vessel, was a single-ship and quite different from earlier French cruisers. Launched in 1890, she was heavily armoured and was the first French armoured cruiser to have the "plough" bow, not to be confused with a ram bow. Like many French vessels she was years

being completed and when commissioned in 1895 was already obsolescent. She was sold to Peru in 1912 but was never delivered. In 1920 she was sold to Belgium and converted to the cargo ship Peruvier.

From BURGESS MEDIA SERVICES, PO Box 5121, Wellington, New Zealand



DU'PO' DE LOME. (Photo — BMS Photo Collection)



## Passenger Ships of Australia and New Zealand; Vol I and Vol II

By PETER PLOWMAN  
Published by Doubleday Australia  
Reviewed by Lieut J. Straczek

*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 absolute 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.

For 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 commended.

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

*Back in 1880, long before naval enthusiasts 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 can now be seen in the reprint of this classic, courtesy of Conway Maritime Press.*

The book spans a total of 617 pages and measures 9½" by 6". All the major, and many minor, naval powers are included. Within each section lengthy descriptions of the newer and major men-o-war are presented, followed by special chapters devoted to Naval Artillery, engines, boilers, torpedo warfare and armoured ships.

## BOOK REVIEWS

The monitor HMVS CERBERUS rates a mention, but only in a table at the rear of the book.

"Warships and Navies of the World 1880" is illustrated by a series of professionally drawn artist's impressions and line drawings to accompany the individual ship descriptions.

## "Battle for the Falklands — Naval Forces"

Text by ADRIAN GILBERT  
with ANTHONY WATTS

Published by Osprey

Review Copy from Princeton Books Pty Ltd

Reviewed by Ross 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 comparisons of the opposing forces. Like all the books, the actual campaign is written in an easy style, accompanied by very clear black and white and colour photographs of all facets of the operations, 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.

## 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 brought together under the one cover. Many previously unpublished photographs are used to illustrate the various types of ships used during the period, and a wealth of detail about each ship is included.

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 used as a "book of reference". Some very interesting facts have come to light and all are correct.

It is surprising how little is known of our Colonial Forces even in official circles. Twenty years ago I contacted the then naval historian for details of the NSW torpedo boats "ACHERON" and "AVERNUS". I was informed that the two boats were built in England in 1885.

The department was unaware that both boats were built in Sydney in 1878-79. As regards the two NSW boats, only one photograph of "AVERNUS" has been used in mo. naval history works and for many years was thought to be the only one in existence of a NSW torpedo boat.

By some good detective work the author of Australia's Colonial Navies was able to locate quite a few more authentic photos of both boats. From Victoria came some rare shots of the early Victorian Navy, while the HMAS "CERBERUS" Museum came forward with some delightful shots of the old "NEPEAN" and "LONSDALE". Taken all round, Australia's Colonial Navies is a decidedly valuable reference work on the naval forces of the States before Federation. A highly recommended book indeed.

## Battleships of the Grand Fleet

By R. A. BURT AND W. P. TROTTER, MC

Published by Arms and Armour Press

Review Copy from Thomas C. Lothian 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 have also rated 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 sheet and illustrations, including some very unusual shots. The book comprises mainly photographs with captions. The reader follows the career of each class with a photographic record.

In fact the secondary title of this book is "A Pictorial Review of the Royal Navy's Capital Ships in World War One", and an excellent pictorial review it is. One double page line drawing is included, showing HMS "BELLEROPHON" in detail. I was a bit amused when I read the captions regarding our old battlecruiser "AUSTRALIA". In the data sheet I found that she was scuttled off Melbourne on 23rd April, 1924, but on turning the page I found that this had been rectified, she was scuttled off Sydney on 12th March, 1924! It does seem that Australian naval history is still not well recorded in the United Kingdom.

One excellent feature of the book is the very good step by step record of alterations made to each class of ship, many of them bearing little resemblance to the appearance shown at the beginning of their careers. War modifications were quite savage in some cases. When viewing British battleships, I must confess that the "ROYAL SOVEREIGN" class is my favourite. To me the "Rs" were lovely ships, the first British battleships to sport a single funnel. This class is well covered, including photos of "RAMILLIES" and "RESOLUTION" being cut up for scrap.

Battleships of the Grand Fleet is the type of book that one can pick up and read from time to time with pleasure. Reading the captions and spotting the alterations is quite interesting, and well worth the effort. Thoroughly recommended.

## The Sea Hunters

By KENNETH POOLMAN

Published by Arms and Armour Press  
Review Copy from Thomas C. Lothian Pty Ltd, Melbourne

Reviewed by Harry Adlam

*I must admit that I have been a fan of Kenneth Poolman's for quite some time, and believe him to be one of the best writers on the subject of the Fleet Air Arm. His books are always appealing, and very easy to read.*

The Sea Hunters follows his usual, well researched pattern, featuring the careers of some of the "Woolworth" carriers of World War Two (mainly the American ships) dealing with the aspect of the "Hunter-Killer" groups. "Built by the mile, and cut off by the yard", is a term that has often been used to describe these war-built carriers, and indeed the speed at which they were built was amazing. Even so, they were very efficient weapons of war. When an escort carrier joined a squadron of destroyer escorts they proved that they could catch the U-boats.

Kenneth Poolman follows the general operations of the "hunter-killer" groups, describing the successes as well as the failures. It would appear that the earlier diesel engine escort carriers gave some trouble at first, but the steam powered ships seem to have given very little cause for concern. Escort carriers were built for both the Royal and United States Navies. In reality, there were a great number of differences in the two types. In the British escort carriers, the aircraft were mainly parked on the flight deck, whereas the US variants had a hangar deck with a lift.

Aircraft types differed of course, and as the Royal Navy used the reliable old Swordfish as its main strike weapon, the flight decks of the transferred American built carriers had to be lengthened, as the "Stringbag" couldn't use the American catapult.

The Royal Navy had some problems with petrol storage which resulted in a serious accident in at least one carrier. Strange to say the Americans had no trouble at all in this respect. But despite the criticism aimed at the "Woolworth" carrier, it did a fine job.

The Royal Navy was extremely happy to receive some thirty-eight of them under Lend-Lease. The Sea Hunters is a very interesting book, well written, and well illustrated. For aircraft carrier buffs, the book will be a must. As mentioned before, I consider Kenneth Poolman an able writer in this field. Thoroughly recommended.

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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



HMAS ADVANCE and a Fleet Air Arm Tracker anti-submarine aircraft apprehending a foreign fishing vessel. (Photo — RAN)

# RAN Participation in Coastal Surveillance

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, not the least being the cases 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 opinions highlight the ignorance which commonly abounds concerning this vital task. Before I can begin to explain just where 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 bureaux. 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 at 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 sorties by Customs 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 no good having intensive cover of the sea areas off Broome in WA if the major threat is 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

that Department about the availability of vehicles to assist. For example a Navy patrol boat may be assigned to investigate reports of illegal fishing or a Department of Transport and Construction navigational vessel may be asked to collect samples from an oil spill at sea. The Department of Aviation's operational authorities also play a role in data collection for the ACSO. The pilots of commercial aircraft, merchant ships, trawlers and others all provide valuable information; in fact, about one-third of all surveillance reports come from voluntary sources.

The combined assistance of all the Departments and Authorities works to produce a complete picture of activities taking place around the Australian coastline at any given time. This information is used to develop immediate surveillance tasking, longer term plans for the use of surveillance vehicles, and to inform the Government of the degree of surveillance required.

So much for the organisation; now where does the Navy fit in, and how do the men in uniform achieve the aim? The brief background of surveillance activities that has been painted will give some idea of the scope of the task, remembering that Australia has the longest coastline of any country in the world. Add to that the need to provide coverage of the 200 miles Australian fishing zone and the total area involved almost becomes mind boggling.

Over the past few years Navy has actively been involved in supportive patrols of the sea areas by Attack Class patrol boats. Some of these ships are still in service, but largely they are being replaced by the more capable Fremantle Class vessel which is being built by NQEA in Cairns. Fremantles are faster, have better endurance and sea-keeping qualities, and are generally a more sophisticated platform than the attack.

For the time being we have a mix of both Classes patrolling the inshore areas of the Bass Strait for oil rig protection, the north and north-west of Australia, and the Queensland area; the degree of

coverage or emphasis of each area depends to some extent upon the task to be met but it must be remembered that these ships also have a Fleet support role to play and they are thus unable to spend all of their time on surveillance duties.

Present allocations provide four Attack Class in Darwin, but these are to be replaced by Fremantles in the next eighteen months, two Fremantles and one Attack in Cairns, and four Fremantles in Sydney. The Cairns Attack Class boat HMAS Barbette will be replaced by two Fremantles in 1984 thus making four boats available from North Queensland surveillance while the number of boats finally in Sydney will depend upon the extent of oil rig protection required 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 tasking responds to requests from the ACSO, but also takes cognisance of requests from other departments. Our ships embark officers from Quarantine and Immigration to conduct investigations of outlying islands or coastal waterways, and assist Customs launches and aircraft in co-ordinated responses to smuggling. The most publicised activity relates to fishery protection and in this area the boats in Cairns reap the lion'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



The problem of coastal surveillance is no new comer. In the late 1960s/early 1970s, Attack class patrol boats began arresting fishing boats for breaches of the Continental Shelf Act. (Photo — RAN)

boats spent 599 patrol days at sea and steamed 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 bases 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. Readers may recall the incident of Christmas Day last year when the Taiwanese fishing vessel Yuan Tsuan broke out of Cairns Harbour in a dash for the open sea. HMAS Townsville responded at 0200 on Christmas morning and was at sea soon after, having recalled her crew from the warmth and comfort of their homes. Her commanding officer became involved in an international incident of hot pursuit in which he carried the responsibility of applying force with minimum risk. He did well and successfully escorted the Taiwanese back to harbour. Imagine though if he had sunk her and caused loss of life; think of the press and political reaction. In this case all turned out well but the point being made is that even in peacetime the men in our ships become entangled in situations

where their decisions have wide ramifications and Navy's responsibilities are very great in this regard. The captains of ships in Bass Strait have the powers of the Australian Federal Police in protection of oil rigs from terrorist activity and all patrol boat commanding officers are empowered to arrest vessels engaged in illegal activities.

Even though the RAN has been involved in surveillance for several years and is part of an organisation which works well, there are still some problem areas. Navy needs to receive suitable shipping so that it doesn't waste valuable steaming time to no purpose; The Navy is working to improve its communications with civil aircraft to provide vital voice links in co-ordinated searches or rescues; it requires better knowledge of our surveillance areas so that it can make judgements concerning tides, weather, chart requirements and the like. All of these matters show that surveillance is an ongoing task and that everyone concerned is forever learning how to do it better.

Before concluding the importance of aircraft to the surveillance task must be emphasised. Patrol boats respond to sightings and become the investigatory side of the team but they cannot ever assume the search role. This has been and will continue the province of aircraft, both civil and defence. Navy tracker aircraft carried out patrols in the seventies

from Darwin and do so today in Bass Strait, while RAAF and civil aircraft conduct routine surveillance in support of the organised programme devised in Canberra. Many people associate defence participation in surveillance with patrol boats but to do so is to misunderstand the vital role of aircraft.

## 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 peace-time 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 everyday activities that count.

Any examination of the Navy shows that its professionalism in the routine leads the way to success in the unusual and in this regard the banner headlines about the latest fishing boat arrest 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.



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## The Gun, Is It Still A Required Weapon?!

The quad pom-pom aboard an RN  
destroyer in World War II. (Photo —  
Conway).

**I**N 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-gunned, making a shore "softening-up" practically impossible.

In the serious matter of AA defence, much faith has been placed in 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 armament of a ship fulfils 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

by HARRY ADLAM

shoot back with anything at all rather than just sit there and watch. Although most 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 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 is still 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 oncoming missile may be able to stop the weapon and even destroy it. The main purpose of the multi-barrel pom pom was to fill 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 and being constructed carry a wide selection of gun calibres to meet aircraft, surface and missile threats.**

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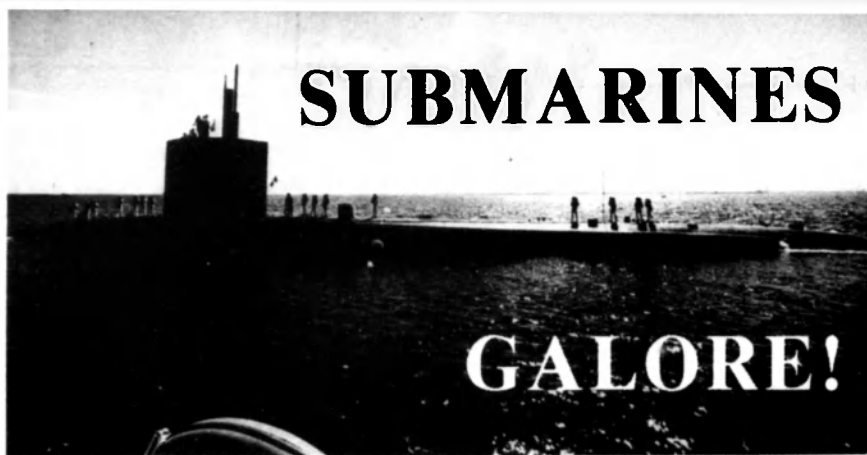
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USS SEA HORSE.

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.

by VIC JEFFERY (PHOTOS BY NORM DELLOW)

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 visitors, 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.



USSR ASPRO berths at HMAS STIRLING, a popular rest and recreation port for US submariners. The base has had more than 30 nuclear powered submarines visits since its commissioning in 1978.



An unusual angle of the sail of USS TAUTOG.

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.



USS TAUTOG, looking aft.



The Stars 'n' Stripes fly over US TAUTOG after berthing.



USS BILLFISH, silhouetted against Cockburn Sound as she slips into HMAS STIRLING.

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by Commander  
**JOHN D. ALDEN**  
US Navy (Retired)

**T**HE 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.

Authorized in 1888 as cruiser number 6, the *Olympia* was over six years in the building. Her contract was awarded to the Union Iron Works of San Francisco as part of a congressionally-mandated effort



USS OLYMPIA, original appearance. (Photo — USN)

## USS OLYMPIA

to establish a complete domestic capability for warship construction. It was a time when the Navy faced serious problems in the procurement of heavy steel armour plate and gun forgings in addition to the usual difficulties in obtaining machinery and naval equipment on the West Coast. The *Olympia's* keel was not laid until June 17, 1891. Erection of the hull proceeded rapidly, and she was ready for launching on November 5, 1892 with Miss Ann Belle Dickie, the daughter of a shipyard official, performing the honorary christening. However, further construction and fitting out lagged after this milestone, and the cruiser was not commissioned until Captain J. J. Read ordered her colours hoisted on February 5, 1895.

The *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 waterline. 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 pro-

pulsion 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 344 feet and a breadth of 53 feet, a normal displacement of 5,870 tons, and a mean draft of 21½ 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 dished tradition, she also carried a seldom-used two-masted schooner auxiliary sail rig. Her bunkers held coal sufficient for over 6,000 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 casemates in a twelve-sided cradled amidships on the main deck, 14 6-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-mch Whitehead torpedo tubes 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 turret 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 their staterooms.

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, telegraphed 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

1899 and 1902. When recommissioned, she was assigned to the North Atlantic Squadron as flagship of the small Caribbean Division. For the next four years she showed the flag at Panama, Tangiers, Smyrna, and the Dominican Republic before becoming the summer cruise ship for the Naval Academy at Annapolis and finally, in 1912, a humble barracks ship at Charleston, South Carolina.

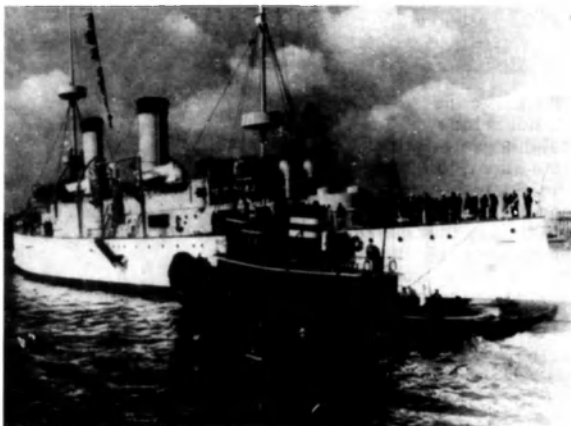
With approaching US involvement in World War I, the *Olympia* was brought out of retirement, rearmed with 12 4-inch/40 calibre guns in place of her old mixed battery, and assigned to patrol duty off New York. In January, 1917, she hit a shoal in Long Island Sound and had to go into drydock for major repairs, during which she was again rearmed with ten new 5-inch/51 calibre guns. After more patrol duty in the North Atlantic, she was sent in 1918 to Murmansk, Russia, as part of the Allied anti-Bolshevik intervention force. At war's end she was shifted to the warmer waters of the Mediterranean, Adriatic, and Black Seas to help stabilise 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 for burial in 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 consumed by moth and rust. At first, visitors were allowed to wander about her decks, and vandalism and souvenir hunting took their toll. Finally 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 boneyard until only the *Oregon* and the *Olympia* were left. The famous battleship *Oregon* had been taken in hand by her namesake state in 1925 and ensconced as a visitor's attraction in Portland, while the *Olympia* remained all but abandoned. In 1931, she was reclassified as a miscellaneous relic, IX 40.

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 battleship for service, but the War Production Board pressed urgently for her hull as scrap metal. President Franklin Delano Roosevelt, a naval history buff himself, reluctantly acquiesced in this letter of October 26, 1942, to Secretary of the Navy, Frank Knox:

"Dear Colonel Knox,

It is with great reluctance that I authorize the Navy Department to turn the USS OREGON over to the War Production Board for reduction to scrap metal.



Under tow to 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 organizations would be summarily scrapped.

For the next three years, committees of historically-minded Philadelphia citizens under the leadership of Dr Henry D. Learned and Francis D. Pastorius laboured to raise sufficient funds to meet the Navy's requirements. Finally the Keystone Dry Dock and Ship Repair Company 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 Captain Edmund A. Crenshaw, US Navy (Retired) as custodian. Unhappily, the shipyard soon ran 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 port 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 cruise: to something of their original condition. Sea Explorer units, Naval Reserve groups, technical school students, 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 refitted with modern communication equipment as a civil defence mobilisation station, while the old warrant officers' wardroom has been refurbished 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



At her present berth, with the USS BECUNA. (Photo — USN).

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 woodwork uncovered from multiple layers of paint. A number of the original furnishings have been recovered, repaired, and reinstalled. 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 starboard engine room, and around the topsides. One enthusiast was lovingly burnishing the breech mechanism of a 5-inch gun, another was scraping grease and corrosion from the ship's ancient ice-making plant, and a couple of Sea Explorers were disassembling and cleaning an old 6-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 powers of Delaware River. The 8-inch turrets 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 waterproof composition. Since leaving the naval shipyard, the ship has been shifted to three 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 spattering of blue paint when the bridge was given a bi-centennial coat. According to the *Olympia*'s caretakers, the blue paint cannot be removed from the new composition deck without special treatment, and they have taken steps to rectify the spotty 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 submarine *Becuna* (SS-319), sailing ship *Moshulu*, and other mementos of Philadelphia's maritime past. Here, if sufficient funds can be obtained, future generations will be able to stand in Commodore Dewey's footprints on the flying bridge of his flagship, look down over her bristling guns and massive ground tackle, and relive the stirring events of naval history created by the cruiser *Olympia* and her gallant crew.

#### *Olympia*

Length on Load Waterline:	340 feet
Extreme Breadth:	53 feet, 4 inches
Mean Draft:	21 feet, 6 inches
Normal Displacement:	5,870 tons
Armament:	4 8-inch, 35-calibre breech-loading rifles 10 5-inch, 40-calibre rapid-fire guns 14 6-pounders; 6 1-pounders, 4 Gatlings 6 18-inch, Whitehead above-surface tubes 4 4 inches (slopes); 2 inches (flats)
Torpedo Tubes:	Two-masted schooner
Protective Deck:	Two-screw, vertical triple-expansion
Auxiliary Sail Rig:	21.69 knots; 17,313 indicated horsepower
Engines:	33 officers; 395 enlisted men
Performance:	
Complement:	

#### USS Olympia Cruiser NO 6

Built by Union Iron Works, San Francisco, Cal  
Authorized September 7, 1888  
Commissioned February 5, 1895  
Reclassified CA-15 July 17, 1920  
Reclassified CL-15 August 8, 1921  
Reclassified IX-40 June, 1931, and thereafter maintained as a naval relic  
Released to Cruiser Olympia Association September 11, 1957  
Restored and maintained as a naval shrine and museum at Philadelphia.

(This article was kindly supplied by the Cruiser Olympia Association, Inc.)



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## 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 Falklands. Still, after all this time numerous errors continue to appear in generally competent articles.

Robert Kendall Piper's article FALKLANDS and the INVINCIBLE 1914 (The Navy, Jan, 1983) contains a fairly representative example of the type of error being referred to:

*"Sturdee taking no chances, kept his dreadnoughts out of range of the enemies' (?) 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 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."*

It is obvious that the INVINCIBLE and INFLEXIBLE were far superior ships to the SCHARNHORST and GNEISENAU. In practice they were six knots faster, far better protected, and each main turret fired a greater weight of metal than 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 13½ degrees elevation and using the 2 crh 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 degrees which gave a range of 17,800 yards, 1,450 yards further than the British 12" of 1914. The battery mounted 8.2" guns had an elevation of only 16 degrees and consequently the maximum range possible was considerably less, only 13,600 yards.

The British battlecruisers began firing at the Leipzig at 16,000 yards and ranges varied from there down to about 8,000 yards. However most of the action was fought at about 12,000 yards, just outside the maximum range of the German 5.9" secondary battery. Even so the INVINCIBLE was hit twenty-two times (12-8.2", 6-5.9" and four unidentified) and INFLEXIBLE three 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 shells tore the heart out of the smaller German ships. However there were a number of questions that should have been 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 meant 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 661. To this CARNARVON added 85 7.5" and 60 6", which totals a massive one thousand three hundred and nineteen shells. Togo's four battleships at Tsuchima sank a battlefleet with less than four hundred and fifty rounds.

The battle of the Falkland Islands was an overwhelming victory for Sturdee over von Spee but there are times when we all like to speculate whether von Spee might have done better. The first course of action he might have followed was to have avoided

the Falkland Islands altogether. Strangely von Spee's major captains, Macke, Lüdecke, and Haun, were all opposed to the idea, but von Spee was determined to carry the operation through. Sturdee planned to sail at noon on December 8 to begin his search off the coast of South America. So, if von Spee had avoided the Falklands he would have been almost into the North Atlantic by the time Sturdee realised his mistake and retraced his steps.

Secondly von Spee, uncharacteristically, took no precautions in his attack. He sent in GNEISENAU and NURNBERG with the rest of the squadron only five miles behind. He had the opportunity to send one of his light cruisers, for example his fastest ship DRESDEN, to scout Port Stanley. The rest of the squadron could have waited safely over the horizon.

Thirdly, when the leading German ships were sighted, only one British unit, KENT, was at half an hour's notice for steam. 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 headlands would have protected his ships from fire by the ships in the harbour. KENT, the only unit that could have got safely to sea, would have been overwhelmed or brushed aside. This stalemate would have left Sturdee with the choice of sailing and fighting a murderous short range action well within torpedo range, or waiting till nightfall when he would have risked von Spee's escaping in the dark. It is readily admitted that such an action strains the bounds of probability but von Spee was a courageous man and he promised to sell himself dearly.

A fourth possible course of action concerned the light cruisers. After the stern chase had begun and its inevitable conclusion became obvious, von Spee ordered his light cruisers to escape. The three ships turned south instead of continuing to sail in the same direction as their flight had been, roughly to the south east. Had they sailed to the south east, the British smaller cruisers would have had to sail around the German armoured ships and the German light cruisers would have gained a precious couple of hours that might have meant escape, at least for the moment. It is most likely that this is what von Spee had in mind when SCHARNHORST and GNEISENAU turned to face their destiny.

The battle of the Falkland Islands was a resounding British victory which re-established the supremacy of the Royal Navy on the high seas. Today we can still feel a touch of sympathy for the two thousand or so men who died that day, as they must have known would be their lot, from the moment war was declared. Von Spee like von Muller represents all that was chivalrous in the prewar German naval tradition before propaganda and the reality of the U-boat campaign dulled the memory. His death was mourned on both sides of the western front.

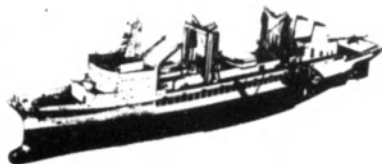
The 1914 action off the Falkland Islands was really a cruiser action like hundreds of others, but it marked the end of an era — the era of the "lay her alongside and shoot it out" gun-battle which had begun in the time of Henry VIII and the MARY ROSE. The only thing Sturdee had to worry about were von Spee's guns; there were not the submarines, the mines, or the aircraft that were revolutionising warfare in the North Sea. Falkland Islands 1982 seems to be the start of next era.



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HMAS SUPPLY, 1982. (Photo — RAN).

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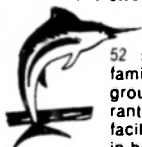
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# "D" Class Cruisers in New Zealand

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 at 29 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 46' 6"; Draught 16' 6" at full load; Displacement was 4,650 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 poms 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 "D's" 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.

DUNEDIN 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 in the South Atlantic on November 24, 1941.



HMS DIOMEDE. (Photo — RNZN).



# NAVY LEAGUE DIVISIONAL & CADET NEWS

## VICTORIA

### TS MILDURA

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 Koorlong 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, took 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 1983 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 WANER, 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.

Sixteen 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 barbecue on the Sunday afternoon.

## NEW SOUTH WALES

### Some Facts About the NRC

The Naval Reserve Cadets is a voluntary youth organisation administered by the Royal Australian Navy.

The aim of cadet training is:

By predominantly voluntary effort to better equip young people (boys and girls 13-18 years) for community life by fostering initiative, leadership, discipline and a sense of loyalty.

Cadets learn seamanship, how to handle both sail and power boats, navigation, signalling and many other existing activities in Naval establishments and on board ships of the RAN.

After passing out as a Seaman, a cadet may undertake secondary training in gunnery, cooking, naval airman, mechanical and electrical engineering, physical trainer, communications, boat charge and music courses. There is no pressure on cadets to join the RAN or the Merchant service, though information about these careers is readily available. Parades are held on Saturdays and cadets are insured against accident while on cadet activities.

### OFFICERS, INSTRUCTORS & CADETS

Ladies and gentlemen interested in an appointment in the NRC should contact the Senior Officer, Staff Office, NRC, HMAS WATSON, Watsons Bay, NSW, 2030 — Phone (02) 337 0222 or (02) 337 0216.

## TS SYDNEY — A Brief History

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

In 1921, a new organisation of similar aims and objectives — The Navy League UK (NSW Branch) led to the formation of two separate Units:

"Birchgrove" and "Drummoyne".

The "Drummoyne" unit continued to function as a Naval League Cadet Unit until 1928 when it came under the sponsorship of the Sydney Training Depot — Voluntary Sea Training Establishment. Meanwhile it continued operations as the "Drummoyne" Unit of the Navy League.

A new base of operation for the Unit was officially opened on November 26, 1932, on Snapper Island. Thirty Cadets were to spend some 18 months of hard toil clearing the Island of scrub and lantana bush.

Official recognition of the Drummoyne Unit was granted in 1954. The Navy League Cadets, together with the Snapper Island Sea Cadet Unit, formed the nucleus of the Australian Sea Cadet Corps, New South Wales Division. This new Division was jointly administered by the Commonwealth Naval Board and the Navy League of Australia.

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 enrolment in this Unit. They should contact:

The Cadet Liaison Officer, HMAS WATSON — Phone 337 0216.

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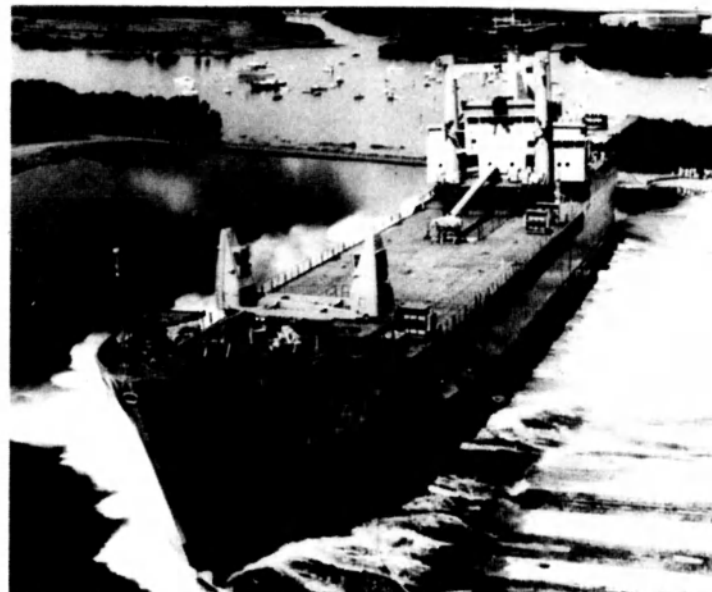
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THE NAVY

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