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THE NAVY
The magazine of THE NAVY LEAGUE OF AUSTRALIA

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The visit commenced on 10th October and two days were spent meeting members of the Auckland Branch of the League; a visit to the RNZN's principal shore establishment HMAS PHILOMEL, a meeting with the Commodore, Auckland; and a visit to the Sea Cadet Unit TS BELLENGA.

The Conference was opened on 12th October by the Deputy Chief of Naval Staff representing the Chief of Naval Staff who was in the United States and was attended by representatives of the NLNZ's three branches together with a number of observers. The conference lasted all day and was followed by a dinner attended by Navy League members and their friends.

The fourth day of the visit included a Navy League Service in the Chapel at PHILOMEL attended by League members and Sea Cadets from local units; two cadets read the Lessons in admirable fashion.

The purpose of the visit was to offer advice and encouragement to our New Zealand colleagues to assist with the Sea Cadet Corps and allow the Navy to benefit from the wider community. It is easy to forget the rest of the world and its troubles in beautiful New Zealand, but the writer has the feeling that there is more interest in the world than in New Zealand.

Two Parliamentary Committees are to be established by the NZ Government, one on the Defence and the other to keep an eye on NZ participation in the ANZUS Fragile Project - yes, there is an anti-frigate lobby in New Zealand and well, the health report can be expected to influence public thinking and the Government's decision to change or not change the present legislation.

Australia and New Zealand are important to each other not only for trade and economic reasons, an area where considerable progress has been made in recent years to bring the countries closer to each other, but in the vital area of national security where the ANZUS rift has created difficulties for both countries.

It is easy to forget the rest of the world and its troubles.
Days at sea: 107
Distance steamed: 36,304 nautical miles

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Distance steamed: 36,304 nautical miles

Days at sea: 107
Distance steamed: 36,304 nautical miles

Ex-Navy ship to become luxury liner
The former Royal Australian Navy oceanographic research vessel HMAS COOK, sailed from Sydney on 1 October bound for the Greek Islands where she is to be converted into a luxury passenger ship. The ship was sold earlier this year for an undisclosed amount by AUSSALE, the Commonwealth sales agency. The new owners, Stability Lines who are based in Piraeus, Greece, plan to spend up to $10 million rebuilding and refurbishing the ship.

Ex-HMAS COOK alongside Garden Island, complete with her new name. (Photo • T. Weaver).

HMAS Darwin returns from Gulf duties
The Royal Australian Navy guided missile frigate HMAS DARWIN, returned to her home port of Sydney on Tuesday, October 1 after a six month deployment to South East Asia and the Gulf region. Darwins' return marked the end of a major operation involving about half of the RAN's vessels.

HMAS ADELAIDE (Photo • RAN)

The repositioning of the ship, the first of the USN FFG-7 class built for Australia, is in line with the Government's policy aimed at progressively basing about half the Navy's major combatants in WA by the end of the decade. A major building program is also under way at Australia's west coast Naval base, HMAS STIRLING, to upgrade facilities for new ships and submarines.

Now Navy PR vans
The Royal Australian Navy has launched its latest additions to the fleet — MELBOURNE, BATHURST, BRISBANE and SHEEAN. The HMAS Shiptype additions, along with the new specially equipped $80,000 Navy public relations (PR) vans, give a brief farewell speech to the ship's company and divers before leaving the ship for the last time.

Deployment Details
Distance steamed: 56,904 nautical miles
Days away from home: 182
Days at sea: 107

New Navy Maritime Command
Australia's new Maritime Command, Rear Admiral Bob Wells, will assume command of the Australian Fleet during a shipboard ceremony held on the Heavy Landing Ship HMAS TOBRUK on 7 November 1991. The changeover will also witness the first flight of the new Maritime Command, Captain A. Doolan, AO. The appointment of the new Chief of Naval Staff, RADM Doolan, was the Deputy Chief of Naval Staff in Canberra.

Navy VIP Sea Day
Fourteen Royal Australian Navy ships and vessels manned by more than 1500 officers and men participated in a VIP-Media Sea Day off Sydney, on Wednesday, 6 November. Six of the larger ships sailed from Sydney at 0900 with embarked Navy King and Seabird helicopters operating from the Gulf veterans, HMA Ships WESTRALIA and DARWIN. The third unit is named after the latest of the Collins class submarines — will be in Sydney and will travel through most of NSW.

The RAN is known as one of the RAN's guided missile frigates, the MELBOURNE, and will be based in that area. The RAN's Mediterranean Command has its headquarters in the country.

Three RNZN frigates approach Auckland at the beginning of the Review week.

To begin the celebrations, fourteen New Zealand and seventeen other warships from eight allied navies sailed into Auckland's harbour on a windy Tuesday morning, 1 October. Greeting the ships for the three hour long ceremonial entry were several hundred spectators on the northern headland, some equipped with deck chairs, mounted in the old gun emplacements to avoid the 30 knot gale conditions and occasional rain squalls.

Leading the Fleet Entry were the "Kiwi" Fleet's larger units, including the frigates CANTERBURY, SOUTHLAND, WELLINGTON and the support ships MONOWAI and TUI. Nine Navy helicopters, including seven Waps, normally flown from the frigates escorted the first group into Waitemata Harbour, while the Royal Marines Band played at the nearby Princes Wharf.

To provide sufficient alongside wharf space many of the ships "doubled up" at the naval base, HNZN'S PHLOXEMEL, with others berthing on the city side at Queen's and Princes wharves.

Sailors from the shore establishment HNZN'S TAMAKI led the parade of naval personnel through the streets of Auckland on Thursday 3 October. More than 1000 officers and other ranks from nine stations marched three abreast behind the bands from Australia, New Zealand and Great Britain. Greeting the marchers were tens of thousands of Aucklanders with the official salute being taken at the Town Hall, the welcome being far warmer than the weather.

The actual Review Day on Saturday, 5 October dawned fine and clear. Ships had commenced moving to their allocated anchorages on Friday afternoon with the remainder on the morning of the review. Two long lines of warships were ultimately formed, the northern one comprising the sixteen larger units and the southern line, thirteen smaller vessels. HNZN'S TUI, the official Review Ship embarked the New Zealand Governor General with the other naval and official guests. Escorting TUI over the route of the Review was HNZN'S TARAPUNGA, herself followed by several harbour ferries and other privately owned craft.

The Review of the ships and the naval flypast of RNZN and RCN helicopters brought to a climax, the week of celebrations to mark the 50 years of the Royal New Zealand Navy. Thousands of people from the various Auckland suburbs gathered on the foreshores and afloat in boats to witness the largest Naval Review ever conducted in "Kiwi" waters. Fortunately the predicted gale force winds abated for the day. TUI departed her berth to systematically review the ships, all manned and formally dressed, with each unit providing three cheers for the Governor General.

Some historic vessels also took their place at the north-eastern end of the review lines, these being five former auxiliary patrol craft which provided harbour defence during the Second World War. Two former Fairmile B Motor Launches, originally in service with the RNZN from 1943-45 were also present. Converted to harbour ferries, named NGAROMA (ex ML 402) and IRIE MOANA (ex ML 409) the two boats have sailed almost continuously upon the waters of Auckland's harbour since 1969 and 1965. Preserved atop the main dockyard wharf was the 72 foot Harbour Defence Motor Launch No. 3563, earmarked for the nearby Naval Museum.

Far removed from the excitement of the main harbour events were five former naval ships, the largest, the former HMAS/HMNZS LACHLAN out of sight at the RNZN ammunition depot west of the Auckland Harbour Bridge and the four smaller class patrol boats, decommissioned several years ago. The latter were moored near LACHLAN (one boat) and at the RNZAF base Hobsonville (three boats).

The RNZN 50th Anniversary Celebrations came to a formal close on Monday, 7 October, with the departure from Auckland of the majority of the visiting ships.
Various ships from various nations.

Malaysian frigate LEKIR.

Singaporean landing ship on the move. (Photo - B. Morrison)

HMS NZS MCA and her three sister RNZVR training vessels.

HMS NZS PHILOMEL wharves. (Photo - B. Morrison)

Kiwi small ships at Queens Wharf.

HMS NZS MONOWAI on Review Day.

Review ship HMS NZS TU1 and friends.

HMS NZS WAKAKURA.

Canadian frigate moves to her Review position.
HMCS PROVIDER berths after the Review.

RNZVR training vessels.

Remains of a Maori War gunboat at Hamilton. (Photo - B. Morrison)

The diving tender HMNZS MANWANUI, dressed overall, recovers her boat.

Paeroa Maritime Museum, with its two former naval vessels. (Photo - B. Morrison)

Ready for preservation at the Naval Museum, Devonport. (Photo - B. Morrison)

Lake class patrol boats, laid up in reserve. (Photo - B. Morrison)

Six inch guns and director from the former HMNZS ACHILLES, at Aircraft Park, Auckland. (Photo - B. Morrison)

Former Fairmile B converted to passenger launch NGAROMA.

Refit barge, ex LACHLAN, moored up harbour.

The Navy, January-March, 1992
The British Pacific Fleet
A Contemporary Report

LYING at the dolphins off Clark Island (see big picture, pages 16, 17) is HMS Duke of York, flagship of the British Pacific Fleet, under command of Admiral Sir Bruce Fraser. Of the King George V class, vessel is one of Britain's four mightiest battleships, all of which have been in Sydney Harbor during the past year. The others are Anson and Howe. Their tonnage is 35,000, length 740ft, beam 100ft, draught 20ft. Their speed is 30 knots.

SYDNEY HARBOR
Australia's Finest Port Is
Huge Base For The Royal Navy

Since the British Pacific Fleet was formed to help finish off the war against Japan, Sydney's waters have never known a day when their harbor hasn't been crammed with shipping. As one of the finest anchorages in the world, Sydney Harbor (Port Jackson is its correct name) has become one of the Royal Navy's bases in the Pacific. It is not uncommon to see two of the world's biggest battleships and two of the world's biggest aircraft-carriers in Sydney Harbor at the same time and there are always dozens of smaller craft. Because Sydney's wharf space is not entirely adequate, many of the vessels, including some of the largest, tie up at small wooden staging called dolphins, dozens of which have been erected on the harbor. Britain's huge fleet also makes almost constant use of the new Captain Cook dry-dock, capable of taking the world's biggest ships. About 20 warships were in port on the day the aerial shots in the series were taken.

ANOTHER of Britain's largest and latest battleships, HMS King George V, in Sydney Harbor. Armament of these ships includes 16 14-inch guns, which fire shells weighing three-quarters of a ton each, 14 25-inch guns, many small guns.

VICTORIOUS, one of Britain's three largest (24,000-ton) and most modern aircraft-carriers. The others, Illustrious and Formidable, as well as 23,000-ton Indomitable, Indomitable, Implacable, have visited Sydney.

12 The Navy, January-March, 1992
NAVAL BASE THEY COULDN'T CAPTURE

The writer knew they would have to capture Sydney Harbor before they could win the Pacific war, but they were never able to get anywhere near it, except for sending a few air-launched submarines into the port. Huge American and British fleets were only there throughout the war. In the picture above two warships lie at anchor, one a warship and the other a merchant ship. Yet the area shown in only about one-third of the port area. Sydney Heads lie away north upper left corner and east

from them lie up the Parramatta River direction (lower right). Apart from a

number of merchant ships which are not identified, the picture shows some

interesting vessels. At Opera Point is the four-masted barque Lampel, one of the last

of stage packets. In Farm Cove are HMS Newfound and two destroyers side

side. They are the Querberos, one of the Q-class destroyers being transferred to the RAN, and the Norman one of the N-class vessels being transferred

to the RN. In Woolloomooloo Bay are ships identified on previous pages and moored

off Clark Island is HMS Duke of York (see page 142). Beyond Garden Island are four

destroyers lying in pairs. At Admiralty Point is the new repair ship HMAS Yarrow and

well to its left the old Australian cruiser Adelaide (ex-Parma Sea). Land visible in

foreground and left of picture is part of North shore. At top South Head Lighthouse

is visible towards left.
LOOKING across Kirribilli Point the North Shore appears like this. The four escort
 carriers (three of which were shown on previous pages) are seen more clearly, while
 the exception of HMS Fencer in Mosman Bay (indicated by arrow). Others are
 (from left): HMS Chaser, HMS Speaker, and HMS Striker.

FOUR carriers appear like this from North Shore looking south. Striker and
 Speaker are in Albert Bay (left). Chaser is in Little Sirius Cove and Fencer can be
 nearly seen in Mosman Bay (right). On opposite side (right) are Garden Island,
 Cape Cook Dock and Duke of York off Clark Island (left).

CLOSE-UP of HMS Fencer gives an interesting indication of the scale of the big
 carriers. HMAS Hobart and destroyers. Behind point is three-funnelled cruiser HMAS Adelaide.

The Navy, January-March, 1992
NAVAL MATTERS
by A.W. GRAZEBROOK

Peace “Dividend” Spurs Defence Export Drive

Writing in the October, 1991, issue of Asia-Pacific Defence Reporter magazine, Professor Desmond Ball, recently retired head of the Strategic and Defence Studies Centre at the Australian National University, stated that “In Asia, the reduction in the superpower presence, the growth of major regional powers, the availability of economic resources, the desire for new technology and concern about increasing political uncertainty are all factors pointing to significant increases in regional defence expenditure.”

The broad thrust of Professor Ball’s statement is in line with statements made over the past year or so by the Minister for Foreign Affairs (Senator Gareth Evans), the Leader of the Opposition (De John Hewson), the Minister for Defence (Senator Peter Durack), the Chief of the Defence Force (General Peter Gration) and the Secretary of Defence (Mr Tony Avery).

Professor Ball went on to quote an estimate that defence spending in Asia, including Japan and China around through South East Asia to India and Pakistan, could rise from the 1990/91 figure of US$70 billion to US$130 billion by the mid-1990s.

Four further factors will fuel this very substantial increase in regional defence expenditure.

1. The economic problems of the Soviet Union and newly emancipated nations of the former Soviet bloc will press them to seek defence equipment exports to raise hard currency foreign exchange.
2. The peace “dividend” reductions in defence expenditure in Europe and the United States will lead to export sales drives by equipment manufacturers in those areas.
3. Surplus defence equipment will be for sale from both NATO and the Soviet Union.
4. The larger regional powers will themselves drive to boost export sales of defence equipment and their own defence industries.

Specific instances of these trends are already appearing. China is continuing her drive for defence export sales of naval, air and army equipment. Examples include the sale of frigates to Malaysia, Indonesia and South Korea, her efforts to sell frigates and frigate building capacity to Singapore, the sale of fighters to Pakistan, army equipment to Thailand and a range of naval, military and air equipment to Burma (Myanmar).

India, so far not a big defence equipment exporter, has plans to quadruple her exports. Specific items proposed include 105mm artillery to Malaysia and Indonesia.

Very large quantities of surplus army and air defence equipment are already available from Europe. Much of that from Warsaw pact countries is obsolete or worn out. Even some of the newer equipment competes unfavourably with the best equipment in service in the West.

The unification of the East and West German armed forces has provided an excellent opportunity to supply modern Soviet and Western equipment not only in fighting capability but also operational availability – time required in maintenance against time available for operational service.

Former East German warships were found to be a decade or more technologically behind those in service in the Bundesmarine. The Mig-29 Fulcrum fighters have much lower operational availability than their modem western counterparts.

Nevertheless, much equipment of Soviet origin is very capable indeed. It would be a major improvement on some of the older equipment in regional service.

Turning to the west, we hear that the Pakistan Navy is to acquire former US Navy Charles F. Adams class guided missile destroyers (of the same basic design as those in service with the RAN).

There are reports that these Dutch Kraiker class frigates, only half way through their operational lives, are to be offered for sale. Indonesia has been mentioned as a possible buyer.

There are stronger reports that Indonesia is interested in purchasing the two Dutch Tromp class anti-aircraft frigates.

Turning to new western equipment, we find the complete major surface forces of both the South Korean and Taiwanese Navies being re-equipped with frigates either of western design themselves or armed with western type weapons and sensors. Modern western mine counter measures equipment, naval helicopters and weapons are being bought in the region. In many cases, these are at least as modern as corresponding equipment in the RAN.

Recognising the re-emergence of ancient tensions amongst themselves, the newly emancipated nations of Eastern Europe are less than keen to reduce their defence forces. None the less, their equipment will be available for export.

The kind of difficulties that may arise in the region are well exemplified by the reports that the Soviet Union is to engender a competition between India and China for a competition for a joint development project for the Yak-141 short take off and vertical landing combat aircraft for aircraft carriers. This aircraft, still in development in the Soviet Union, is their attempt to “leapfrog” the latest British/US Sea Harrier/AV8B type.

Neither India nor China, each profoundly suspicious of the motives of the other, can afford to let the other improve both their naval air capability and their high technology defence support capability by conclusively ending a joint development project with the Soviet Union. By concluding such an agreement with India, the Soviets themselves would gain access to India's experience of testing and maintaining their British built Sea Harriers.

Another example is the Soviet proposal to sell to China the Su-27 Flanker long range air combat fighter – much more capable than the Mig-29 Fulcrums of the Indian Air Force. The published unrefuelled combat radius of the Su-27 is 920km, that of the Mig-29 500km and the F/A-18 460km.

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All these examples must not obscure the fact that regional nations are developing their own defence equipment industries. Some of these are already far more capable than that of Australia. Nor must it be assumed that all of these developments are adverse from the Australian perspective. On the contrary, it is very much in Australia's interests that (for example) nations bordering the Straits of Malacca are capable of ensuring freedom of movement through the strait and that Japan (our biggest customer) is capable of defending herself and her vital import maritime trade.

Nevertheless, the facts in terms of hardware support the regional security developments of Australia's national political and Defence Force leaders.

It is encouraging that our national political leadership recognises the regional security developments. What is still needed is a readiness to recognise that Australia must increase her defence expenditure to ensure that we have the Defence Force required to defend Australia and her interests.

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The Navy, January-March, 1992
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Service Is Our Business

WELCOMES YOU TO YOUR NEW BASE

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Naturally, the Navy's reputation was suffering.

It seemed to some of us in the service that we should take more interest in the national situation. The Chief of Naval Staff, Sir Victor Smith, was obviously thinking along the same lines as we at the end of the sixties were about the approach of the League.

So far as the League was concerned, one of the problems was our lack of knowledge of what was happening in the Navy other than what we learned from the media. The need for information after the discussion was tacitly understood that the Navy and Navy League would keep in close touch and that we in the League would do what we could to support the Navy.

We also found that the more deeply we became involved in naval affairs, the need to think more broadly and to embrace not only the role of the other Services - the Army and Air Force - but foreign affairs and defence policies and not least, the commercial shipping industry. It was obviously thinking along the same lines as at the end of the sixties.

We co-operate with other organisations, in particular the Australian Naval Institute, when prominent naval persons visit Australia.

Proposals to move the Navy out of Sydney and base it at Jervis Bay are not as difficult to do this as one might expect - there are lots of people interested in youth training are not necessarily members. People interested in national security issues and vice versa. Quite often however, the Navy and the Navy League closer together. In an article published ir the September 1987 edition of THE NAVY, Sir Victor said:

"It was suggested that I should write this short review of my comparatively long association with the Navy League. This association has been of two types; firstly as a member of RAN and later as a member of the League.

When I became a member of the Naval Board in 1962 and in my various appointments I realised increasingly the amount of support we have been able to provide for the publication, the Navy and the Navy League closer together. In an article published in the September 1987 edition of THE NAVY, Sir Victor said:

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When I became a member of the Naval Board in 1962 and in my various appointments I realised increasingly the amount of support which is available within the League. As Chair of the Combined Clubs of Australia, I have been able to make the League's perspective known and to encourage others to become involved. I hope I have been able to make the League's perspective known and to encourage others to become involved.

The League's contribution was widely recognised. Perhaps I should say, it is important to make the attempt.

The transition from a sea cadet orientation to an association involved in the nation's affairs, in only a way - the battle is not over. Lack of consultation means that we have not been consulted adequately. One simply has to keep on trying.

In New Zealand, Australia and most Western countries we live in challenging times. For several years now the word "terrorism" has been a frequent word in the media. Its use is on the increase and we have to do our best to keep our country safe. We have to do our best to keep our country safe.

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TRUMPed UP — BETTER LATE THAN NEVER

(from Canadian military then and now)

by Patrick I. McManus

HMACS ALGONQUIN during her TRUMP refit

Systems of Canada Ltd. project definition for TRUMP Toronto-based Litton was expected to pull together a $650 million package for a mid-life refit on the navy's four Tribal class destroyers. Commissioned between July 1972 and September 1973, the ships were at the halfway point in their service life. But the Department of National Defence wanted more than just a refurbishing. The change in the destroyers' primary mission was in recognition of the changed maritime environment. With close to $2 billion invested in a new generation of sub-hunting frigates, Maritime Command wanted its expensive assets protected. Moreover, in the mid-1980s, MARCOM was looking for the day when Canada would have a flexible three-ocean navy, showing greater independence from NATO to protect territorial waters. For the first time since the Second World War, a Canadian Admiral would command his own naval task group from a Canadian warship. TRUMP was the lucky ship of the navy. From the start, the project hit snags. First the set price of $650 million soon turned out to be too low. Since the original design was based on ships without the Second World War tech, there was an unmet demand for the ships. Second, Litton wanted to bring the program in house and make it a model for future projects. The change in the destroyers' electronics and weapons, but change their 20-year mission from anti-submarine warfare (ASW) to area defence, and task group command and control.

When done, the TRUMPs of the Tribals will be able to do something they have never done before — sail outside the protective cover of their carrier battle groups. But that cosy environment around them from one console. There is plenty of finger pointing in TRUMP. Who is really responsible for the endless delays is lost somewhere within the project miss deadline. Nevertheless, TRUMP is back on track. The ALGONQUIN arrived in Halifax last December, one week earlier than its reworked deadline. Post TRUMP

Block 2 surface-to-air missile. The Standard has an operating range of 30 kilometers with a ceiling of 65,000 feet. Once out of the tube it can hit a top speed of Mach 2.3. Just above the VLS and underneath the bridge, is the OTO Melara 76/62 Super Rapid deck gun. Primarily an anti-aircraft weapon, the 76 mm gun can also engage shore and surface targets, firing such rounds as a warning shot across the bow. Its rate of fire adjusts to between 30 and 120 rounds per minute. The ship's last line of defence is the Phalanx Mk 15 Block 1 Close-In Weapons System (CIWS). This 20mm gun uses six rotating barrels that are on the mounting. The Phalanx fires 2,000 rounds per minute with radar guidance, literally sending up a wall of metal at an incoming missile. The eyes of the TRUMPs are long. Medium range radar and the STRI - 3 Fire Control radars are all built by Signalpapillons of Holland. These systems create a 120-kilometer electronic cordon sanitairc around the ship. For additional defence, the Canadian Navy Electronics Warfare System (CANWES) gives the destroyers new electronic counter-measures (ECM) and electronic counter-counter-measures (ECCM) to jam enemy radio and stop being jammed. The tie that binds all these systems is SHINPADS - Shipboard Integrated Processing and Display System. Developed by Computing Devices Company (CDC) of Ottawa and Squiry of Winnipeg, SHINPADS is common to both TRUMP and CPF. Through the standardised AM/UNX-505 mini-computer, information from sensors, radar and additional networks on warships and helicopters within a task group, allow the ship's captain and the group commander to watch the battle environment around them from one console. Not surprisingly, such high tech complexity has earned a stiff price. TRUMP is already two years behind schedule. The proposed 18-month refit period is now stretched out to a more realistic 36 months. Last year Litton and MIL, Davie, whose large yard outside Quebec City handles most of the refit, gained approval for a new contract schedule from DND and DSS. But that said, DSS has withheld contract payments due to delivery delays. As a result, in April Litton launched a $520 million package for a mid-life refit on the navy’s four Tribal class destroyers. But for all the delays, the navy is getting plenty of warship upgrades, without their NATO counterparts’ dollars. With reconfiguration, ALGONQUIN is no longer a sitting target. Her new Phalanx is imbedded in three forward decks, is its most lethal weapon — the Marlin Marika Mk. 41 Vertical Launch System (VLS). Designed for the USN’s Ticonderoga-class destroyer, the VLS will turn the ship into floating missile silos. The system consists of four eight-cell modules which will hold a sail of 29 missiles. Versatility is its key selling point. The VLS can be a basic launch tube adaptable to a wide range of missions. Future variations with the USN will see the VLS with AMRAAM antiship and ASROC/ASW missile launch capability. For now, the Canadian navy missile of choice is the General Dynamics Standard ME2.

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New warships from overseas

A Family of Corvettes

Vasar Thornycroft pioneered the development of the modern corvette in 1964 with its Mk 1 Corvette.

The Mk 1 Corvette was then a new concept recognizing that the traditional patrol craft, although capable of high speeds and being heavily armed and ideal for rapid strike operations, were not suited for long arduous ocean patrol duties.

The solution was a longer ship for good seakeeping, good accommodation for crew comfort, low maintenance and high automation for low crew numbers, effective surveillance sensors and communications, and a comprehensive weapon system for self-protection and for dealing with infringements.

This is the purpose of the oceans - the eyes and ears of a navy patrolling the oceans, watching, listening and reporting the movements of other ships, aircraft and submarines threatening sovereign territorial waters.

Over the years the concept has been developed, by evolution from the Mk 1, in its two forms, to the Mk 3 and to the Mk 9. The Mk 9 has been developed into the 77m Vigilance Class Offshore Patrol Vessel.

- detailed consideration of ergonomics in the operation and maintenance of the ship
- low maintenance yet high reliability
- low crew numbers

These are the lessons learnt by the Royal Navy in the Falklands Campaign - conducting operations 8000nm away from base for up to three months at a time.

1500 Tonne Corvette from Yarrow

DESIGNED FROM THE 1990s

The 1500 tonne corvette provides a well-balanced and effective capability against a wide range of threats and for dealing with infringements. The vessel can carry sufficient fuel, stores and provisions for 30 days of patrol, and is able to defend itself using its own weapon systems.

Over the years the concept has been developed, by evolution from the Mk 1 Corvette, in its two forms, to the Mk 3 Corvette and to the Mk 9 Corvette. The Mk 9 Corvette has been developed into the 77M Vigilance Class Offshore Patrol Vessel.

- excellent for a ship of its size
- low maintenance yet high reliability
- ideal for the offshore patrol role

The Vigilance Class OPV is the result of a long-term programme of requirements gathering, consultation and design work. The requirements were developed in line with the Navy's Modern Technology Programme and the Vigilance Class has been designed to meet the needs of the 1990s and beyond.

The design benefits from the long experience of Yarrow Shipbuilders and the Royal Navy. The design is modular and can be tailored to meet specific requirements, allowing for upgrades and modernizations as technology advances.

The Vigilance Class OPV is designed to patrol the oceans with long arduous periods of watching and listening, yet remaining on the alert at all times. To achieve this capability, priority has been given to:

- good accommodation
- excellent seakeeping
- high level of automatic monitoring and control of machinery and equipment

Anti-Submarine Warfare

The principal ASW sensor is a newly-developed low-frequency active towed array sonar, providing long range detection. Sonar performance is enhanced by noise reduction measures including a low-speed electric drive. Submarines can be attacked by the vessel's own helicopter or by ship-launched torpedoes.

Anti-Air Warfare

Aircraft and missile defence is initiated by the detection of targets using high performance primary and secondary radars and ESM. AAW weapons include 30mm guns and 150mm gun, Sea Wolf II: a high rate of fire 57mm gun with an excellent missile kill probability; a decoy system and two twin 30mm guns.

Surface Warfare

A modern electronic machinery control and surveillance system allows engine running to be adjusted to suit the ship's operations. A modern electronic machinery control and surveillance system allows engine running to be adjusted to suit the ship's operations.

Aviation Facilities

Flight deck, hangar and air weapons handling facilities are provided for a helicopter up to Lynx size. The hangar can accommodate a 1500 tonne Corvette for refuelling and maintenance, with provision for a helicopter up to Lynx size.

Vigilance Principal Characteristics

| Length overall | 77.7 metres |
| Beam | 11.5 metres |
| Draught | 3.3 metres |
| Displacement (Deep) | 1135 tonnes |
| Speed | 31 knots |
| Range | 4500 NM |
| Main Engines | - four MTU 16V 1163 TB93 diesels |
| Diesel Generators | - three (or four) 400 kW AC generators |
| Sensors | - G-Band, frequency agile surveillance radar |
| - 1 Band navigation radar |
| - Radar ESM over 1-18 GHz |
| - LF-HF |
| - HR-VHF |
| Weapons | - four 30mm guns |
| - surface to surface missile launching system |
| Command Facilities | - radar/secure fire control directors |
| - integrated command and control system |
| Passive ECM | - Chaff (EM) and infra-red decoy launching system |
| Communications | - 1 MF, 2 HF transmitters |
| - 1 UHF, 2 VHF transceivers |
| Accommodation | - commanding officer |
| - 11 officers |
| - 18 senior ratings |
| - 30 junior ratings |
| - 24 marines |
| - 6 training boats |

The Vigilance Class OPV is designed to accommodate a crew of 11 officers, 45 junior ratings and 81 total. The ship is equipped with modern electronic machinery control and surveillance systems, allowing engine running to be adjusted to suit the ship's operations. The hangar can accommodate a 1500 tonne Corvette for refuelling and maintenance, with provision for a helicopter up to Lynx size.

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WARSHIP 1991
Edited by ROBERT GARDINER
Published by Conway Maritime Press

The current edition of Warship, marks the third anniversary since the change in publication schedule from quarterly to the annual format. As always the editor has selected a wide variety of articles, covering as many aspects of naval ships, service and national navies as possible within its 250 pages.

Twelve feature articles, are arranged chronologically from the Last Manila Galleon in the late 18th century to the 1956 vintage futurist submarine USS ALBACORE. Each article is supported by high quality black and white photographs, with the pick included in the contribution on the armoured cruiser USS BROOKLYN and the mid war submarines of the French Navy. Two of the more unusual topics covered include the Soviet Leningrad class destroyers of the Second World War and a description of Romanian Minelaying operations of the same period.

Warship 1991 also features a fifty page Review section at the close of the book, with its annual survey of new warship construction, disposals, naval events and weapons systems, plus a brief description of the more notable naval/marine books for 991. These sections are all well illustrated, including the waterborne activities in the recent Gulf conflict.

The book is hard bound with an attractive dust jacket, measures 270mm by 200mm and includes 200 photographs and 85 line drawings. At about $60.00 retail Warship 1991 provides a wide and interesting variety of reading, covering the history of the world's fighting ships as only Conway is able to present.

The German Navy at War
1939-1945
Volumes 1 and 2
By Siegfried Breyer and Gerhard Koop
Published by Schiffer Publishing Co

The first volume of this current series describes and illustrates all of the German battleships, cruisers and lone aircraft carrier to be built and/or manned by the navy in the Second World War. Number two, describes in similar format, the U-Boat. The latter also features naval aircraft and land forces, harbours, shipyards, uniforms and sinking of warships in the 1939 to 1945 period.

With both books, the highlight for all historians is the collection of new and varied photography used to illustrate each book. Mostly in black and white, but some colour, each chapter includes large scale views of the ships, their equipment and personnel aboard.

Definitive captions accompany each photograph with well researched and technical introductions to each chapter or section, covering both the historical and technical.

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HISTORICAL

The Navy League was established in Australia in 1901, initially in the form of small branches of the United Kingdom Navy League (established in 1897) and since 1950 as an autonomous national body headed by a Federal Council consisting of a Federal President and representatives of the six States, the Australian Capital Territory and the Northern Territory.

The Navy League of Australia is now one of a number of independent Navy Leagues formed in countries of the free world to influence public thinking on maritime matters and create interest in the sea.

The Navy League of Australia cordially invites you to join us in what we believe to be an important national task.
MEMBERSHIP
Any person with an interest in maritime affairs, or who wishes to acquire an interest in, or knowledge of, maritime affairs and who wishes to support the objectives of the League, is invited to join.

OBJECTIVES
The principal objective of the Navy League of Australia is "The maintenance of the maritime well-being of the Nation" by:
- Keeping 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.
- Promoting defence self reliance by actively supporting manufacturing, shipping and transport industries.
- Promoting, sponsoring and encouraging the interest of Australian youth in the sea and sea-services, and supporting practical sea-training measures.
- Co-operating with other Navy Leagues and sponsoring the exchange of cadets for training purposes.

ACTIVITIES
The Navy League of Australia works towards its objectives in a number of ways:
- By including in its membership leading representatives of the many elements which form the maritime community.
- Through soundly-based contributions by members to journals and newspapers, and other media comment.
- By supporting the Naval Reserve Cadets, and assisting in the provision of training facilities.
- By encouraging and supporting visits by recognised world figures such as former United States Chiefs of Naval Operations and Britain’s First Sea Lords.
- By publishing “The Navy”, a quarterly journal reporting on local and overseas maritime happenings, past, present and projected.
- By maintaining contact with serving naval personnel through activities arranged during visits to Australian ports of ships of the Royal Australian and Allied Navies.
- By organising symposia, ship visits and various other functions of maritime interest throughout the year.

Member participation is encouraged in all these activities.

JOINING THE LEAGUE
To become a Member of The League, simply complete the Application Form below, and post it, together with your first annual subscription of $20.00 (which includes the 4 quarterly editions of "The Navy"), to the Hon Secretary of the Division of the Navy League in the State or Territory in which you reside, the addresses of which are as follows:

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AUSTRALIAN CAPITAL TERRITORY DIVISION: C/O 45 Skinner St, Cook, ACT, 2614.
SOUTH AUSTRALIAN DIVISION: GPO Box 2129, Adelaide, SA, 5001.
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Subscriptions are due on 1st July in each year, and your membership will be current to 30th June immediately following the date on which you join the League, except that if your first subscription is received during the period 1st April to 30th June in any year, your initial membership will be extended to 30th June in the following year.

THE NAVY LEAGUE OF AUSTRALIA
Application for Membership

To: The Hon. Secretary
The Navy League of Australia

Division

Sir or Madam,

I wish to join the Navy League of Australia, the objectives of which I support, and I enclose a remittance for $20.00 being my first annual subscription to 30th June next.

Name: ____________________________
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(Rank)

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JOIN THE
NAVAL RESERVE CADETS

If you are between the ages of 13 and 18 years:

The Naval Reserve Cadets provide for the spiritual, social and educational welfare of boys and girls and help to develop in them character, a sense of patriotism, self-reliance, citizenship and discipline.

Uniforms are supplied free of charge.

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The interesting syllabus of training covers a wide sphere and includes seamanship, handling of boats under sail and power, navigation, physical training, rifle shooting, signalling, splicing of wire and ropes, general sporting activities and other varied subjects.

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Cadets, if considering a sea career, are given every assistance to join the Royal Australian Navy, Mercantile Marine or the Royal Australian Naval Reserve, but there is no compulsion to join these Services.

For further information, please contact the Senior Officer in your State, using the addresses provided below.

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QUEENSLAND: Senior Officer NRC, HMAS Moreton, Merthyr Road, New Farm Queensland, 4005.

WESTERN AUSTRALIA: Staff Office Cadets, HMAS Leeuwin, PO Box 58, Fremantle, WA, 6160.

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TASMANIA: Staff Office Cadets, HMAS Huon, Hobart, Tas, 7000.

AUSTRALIAN CAPITAL TERRITORY: Commanding Officer, TS Canberra, PO Box E52, Queen Victoria Terrace, Canberra, ACT, 2600.

NORTHERN TERRITORY: Commanding Officer, TS Darwin, PMB 13 Winnellie, NT, 0820.

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Covers:
The further we move into the nineteen-nineties, the easier it is to gain the impression that the capability of our Defence Force is no longer a matter of particular importance; indeed, some misguided people even query the need for armed forces at all, regarding them as provocative and perhaps even dangerous by association.

Both the Foreign Minister and the Governor-General have referred to the fall in status in the minds of some citizens which has accompanied the decline in the importance of international relations. Such a fall may be regretted, and one could wish that the leaders of our armed forces would do more to counter these misunderstandings.

Mr Hayden pointed out that Australia's own record was far from exemplary in this context. In the context of the current debate, it is important to note that the Australian Defence Force is not just a military organisation but also serves as a symbol of the nation's identity and values. In the context of the current debate, it is important to note that the Australian Defence Force is not just a military organisation but also serves as a symbol of the nation's identity and values.

The Prime Minister called for a better balance between pre-occupation with our internal problems and a sense of our international responsibilities. We must develop our policy responses accordingly.
In early 1942 as the list of military defeats and reversals for the Australian, British, American and Dutch military and naval forces began to mount, the feeling in the general populace of Australia was one of depression and a general expectation that the Japanese would invade at any moment.

Almost as if aware of these fears the Japanese were, by April 1942, examining the possibility of capturing Port Moresby, Tulagi, New Caledonia, Fiji and Samoa. The object of this plan was to strengthen the Japanese defensive perimeter as well as cutting the lines of communication between Australia and the United States. The occupation of Port Moresby, designated Operation MO, would cut off the eastern sea approaches to Darwin and provide the Imperial Japanese Navy with a secure operating base on Australia's southern doorstep.

At the same time that the Naval Staff were examining options for further operations the planning staff of the Combined Fleet was working on the same. Though their objectives were different, by early April 1942 the staff of the Combined Fleet had presented the Naval Staff with a proposal for the invasion and capture of Midway Island. By this time it was thought that the American fleet would be “in an ambush where they [the American Fleet] could be annihilated by overwhelming force”.

In essence Admiral Yamamoto was hoping to repeat Admiral Togo Heihachiro’s victory over the Russians at Tsushima in 1905. Admiral Togo with two staffs agreed to go ahead with the Midway operation after the capture of Port Moresby. However, planning progressed slowly until the 18 April when American B-25 bombers led by Lieutenant Colonel James H. Doolittle attacked targets in the Japanese Home Islands.

The military value of this raid was minimal, but its psychological effect on the Japanese home islands might have been desired. The army and navy had failed in their duty to safeguard the homeland and the Emperor from attack. Admiral Yama-moto regarded the raid as a “morning patrol”.

As a result of this first air raid on Japan the Midway operation took on greater importance. Admiral Chuichi Nagumo, at Rabaul, was instructed that the Port Moresby operation was to take place in early May with the Midway operation planned for the following month. The generals and admirals had suffered a tremendous loss of face, and their angry over-reaction eventually brought a succession of strategic disasters.

The Doolittle raid occurred on a day in which the majority of the naval forces were about to be transferred to the new southern command. This day was to be the end of one of Japan’s most successful campaigns and the beginning of a string of disasters.

The Japanese Plan

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Japan’s defensive perimeter as well as providing a secure operating base on Australia’s southern doorstep.

Japanese aircraft carriers may have been in operation MO, the aircraft carriers SHOKAI, HAGURO, SHIKOKU and KAGA 122 aircraft were allocated to take part in the operation but with the advancement of the timetable she had to be omitted as she was due in dockyard hands at the end of the year. However, planning progressed slowly until the 18 April when American B-25 bombers led by Lieutenant Colonel James H. Doolittle attacked targets in the Japanese Home Islands.

The military value of this raid was minimal, but its psychological effect on the Japanese home islands might have been desired. The army and navy had failed in their duty to safeguard the homeland and the Emperor from attack. Admiral Yamamoto regarded the raid as a “morning patrol”.

As a result of this first air raid on Japan the Midway operation took on greater importance. Admiral Chuichi Nagumo, at Rabaul, was instructed that the Port Moresby operation was to take place in early May with the Midway operation planned for the following month. The generals and admirals had suffered a tremendous loss of face, and their angry over-reaction eventually brought a succession of strategic disasters.

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The Navy, April-June, 1992 7
As it was too late to recall the strike all that Rear Admiral Tadachi Hara, commander of the 5th Carrier Division, could do was wait for the return of his aircraft. The two American ships were located at 0954 and the Japanese immediately realized their error. They were about to attack the oiler NEOSHO and the Destroyer Sims. During the course of the attacks that followed the Sims was reduced to a wrecks and sunk, whilst the NEOSHO was severely damaged. She was later sunk by torpedoes and gunfire from the USS HENLEY.

Whilst the Japanese were shadowing Crac and preparing to attack the NEOSHO and Sims the Americans were attempting to locate the Japanese carriers. At 0815 a sighting report was received that two cruisers and four destroyers had been sighted by the American aircraft. The two cruisers and four destroyers were 235 miles northeast of the Americans. This sighting were 235 miles northeast of the Americans. This sighting were 235 miles northeast of the Americans. This sighting was confirmed by a second report at 0937 that eight ships had been sighted by two cruisers and two destroyers.

At 0945 Mission was launched from the USS YORKTOWN’s aircraft. The mission was to locate the Japanese carriers. The mission was successful and the American aircrews located the Japanese carriers at 1100. SHOHO and her consorts were sighted at 1100. SHOHO and her consorts had been sent to locate the Japanese carriers. At 0937 a strike of some 90 aircraft from both Yorktow and the USS YORKTOWN was launched to attack the Japanese carriers. The strike was launched by Rear Admiral Tadachi Hara.

When sighted by the American aircraft, the Japanese carriers were only 100 miles from the American fleet. Neither the Japanese nor the Americans were aware of the other’s location. SHOHO was powered to act because of his earlier decision in attacking the incorrectly reported aircraft carrier and cruiser, NEOSHO and Sims. However, once his aircraft returned Tagaki decided to launch a later afternoon strike against the Japanese carriers, although he had no firm idea as to their position.

The first American aircraft strike was launched from the USS YORKTOWN, arrived over the two Japanese carriers at 1300 to 1305. The Japanese immediately took action in the attack. They immediately began to attack the American carrier. The attack was not successful as it was not possible to alert the other aircraft carriers. The Japanese carriers were attacked by the USS YORKTOWN, which was engaged in trying to destroy the Japanese carriers, were too far away and too busy to provide any support or opposition. The decision by Fletcher to weaken his forces by detaching the rear admiral had proved to be the correct decision. Perhaps the fuel problem, or inexperience, the Japanese carriers were sighted at 1045. The strike was launched by Rear Admiral Tadachi Hara. The strike was launched by Rear Admiral Tadachi Hara.

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The acquisition by the RAN of three Charles F. Adams (CFA) class guided-missile destroyers (DDGs) from the United States in the 1960s has been seen by many as one of the most successful acquisitions in post-war RAN history. These ships introduced into the RAN new technologies that had a significant impact on both operations and capability.

This subject may be approached from a number of levels and the pioneering work on surface-to-air guided missiles (SAGW) will have no effective air defence for the next several years. The first question which has to be answered is “can we afford it?” and that is being thrashed out at present. If the answer is yes, we hope to find a suitable aircraft and a carrier to put it in as our MELBOURNE wasn’t able to take any new generation aircraft.

The appreciation at the time was that the aircraft replacement also involved a replacement for the Melbourne. This made the re-equipment problem even more of a fiscal burden. In December 1949 the Menzies Government announced that the FAA would be disbanded in 1963. Even before the official decision Admiral Burrell had initiated informal enquiries with the RN and the USN about Surface-to-Air Guided Weapon Escorts. Following the FAA decision Admiral Burrell wrote a confidential minute to the Secretary of the Department of the Navy, Mr Thomas Hawkins, which stated: “the need for SAGW ships in the RAN is urgent as we will have no effective air defence for the fleet, other than close range weapons, from the time our fighters phase out in 1963”.

Before discussing the impact the CFA class destroyers had on the RAN it is important to look at the state of the RAN in the late 1950s and examine the reasons for their acquisition. In 1960 the RAN consisted of the following operational major fleets:

- The light aircraft carrier Melbourne with the 21st Carrier Air Group consisting of Sea Venom fighters and Gannet ASW aircraft.
- Three Daring class destroyers.
- Three Type 12 ASW frigates.
- Three Q class ASW frigates (ex-WWII destroyers).

A modest building program of four Type 12 ASW frigates was underway. These ships were to introduce the Ikara anti-submarine (ASW) missile and the Seacat short range surface-to-air missile.

Looking forward to the 1960s, Australia faced a major defence re-equipment programme. Amongst the individual projects were the RAAF's Canberra bomber replacement, the JSF-111 (TAP) and, for the RAN, replacements for the present generation carrier aircraft. The Chief of Naval Staff at the time was Vice-Admiral Sir Henry Burrell. Sir Henry enjoyed a good working relationship with his American counterpart the Chief of Naval Operations (CNO) Admiral Arleigh Burke. This relationship was an important factor not only for the DDG acquisition but for the immediate future of the Fleet Air Arm (FAA). In May 1959 Burrell went to Burke and stated:

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The effective replacement of the Sea Venoms by SAGW ships was ultimately represented in a requirement for 30% of all escorts to be fitted with SAGW.

On 5 January 1960 Admiral Burrell and the Third Naval Member, Rear Admiral H.E. Urquhart, left Australia and visited the United Kingdom, Canada and the United States to study possible designs. In an interview with the Sydney Morning Herald, Admiral Burrell stated his belief that the SAGW ships should be built in Australia and cited the success of the Daring class program in proof of Australia's capabilities. The primary aim of the Canadian leg was to be briefed on RCM progress with helicopter operations from frigates. In 1957 the Canadians began helicopter trials off the frigate HMCS HMFCS Lonsdale. The RAN was interested in the feasibility of operating helicopters from the new destroyers because, although the primary mission of the new destroyers was to provide air defence for the fleet, these ships would also operate in a navy without a carrier.

The Country Class

At the time of Burrell's fact-finding tour, the lead ship of the Hampshire class, the Devonshire, was still six months from launch. The Hampshires were the Royal Navy's first purpose-built missile ships and were designed around the Seaslug surface-to-air missile. This large beam riding missile had its genesis as far back as October 1945. Serious design work on this missile did not begin, however, until 1950 and was to continue through to the start of the next decade. The main features of the Hampshire design were:

- The Seaslug missile system with one channel of fire.
- Secondary surface-to-air missile armament of two Sea Dart launchers.
- Gun armament of two twin 4.5-inch Mk. 6 semi-automatic mounts.
- A fire-generation automated combat data system (ADAS).
- Flight deck and hangar for one Wessex helicopter.
- Combination gas turbine and steam propulsion.
- Flagship facilities.

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The Charles F. Adams Class

The lead ship of this American class was commissioned in September of 1960. These ships were the first guided-missile destroyers purpose-built by the USN and attracted considerable interest in the naval building program. The primary armament of this class was the Tartar semi-active missile. Norman Friedman relates that: "The need for missile ships was so urgent that Tartar DDGs were ordered before the ship itself had flown in any form." The main features of the CFA class design were:

- The Tartar SAM missile which had two channels of fire.
- A two-tier anti-submarine armament of the medium-range ASROC missile and close-range torpedoes.
- The gun armament of two 5-inch Mark 42 automatic guns.
- One single 38 calibre 5-inch semi-automatic gun.
- AN/SPS 52 three-dimensional radar.
- Flight deck/hanger for a light helicopter of the H5S/4 SH-3D type.
- The new long-range AN/PSQ 26 sonar.
- Single-chaft and speed of 27 knots.

Brooke Class

The US Navy also offered the RAN the Tartar equipped Brooke class. A major drawback of this class was that the lead ship was not to be laid down until December 1962. The main features of the Brooke design were:

- Tartar system with a lightweight 46-round launcher (versus 40-rounds in CFA) with only a single channel of fire.
- One single 38 calibre 5-inch semi-automatic gun.
- AN/SPS 52 three-dimensional radar.

Joining the Fleet

Before examining the subsequent decision-making process it is relevant to touch on two other related aspects of the US proposal. First, the US government offered an interest-free loan for the purchase of the SAGW ships. The eventual price of the USN approved a Tartar Improvement Program or TRIP to increase the overall picture was one of a "holiday" from all performance extension programs and a "get well" program was instituted. The TRIP program was to eventually form the basis of the Standard SM-1MR missile.

Although the RAN may not have been aware of the Tartar's problems, they were no doubt very much aware of the sheer scale of the US Navy's missile programs. Norman Friedman estimates that by 1962 the United States' investment, in 1962 dollars, was $4.4 billion in associated R&D. This, if for no other reason, should be sufficient grounds to select Tartar over Seaslug.

The Decision

On 29 June 1961 the Minister for Defence, Mr A.G. Townley, announced the selection of the CFA class for the RAN's new SAGW destroyers. The reasons for
The range of the Hampshire conditioning suitable for Pacific operations. CFA accompanying press reports was that the superior. The reason given in the and two months ahead of enter service two years HMS and second, the missile CFA the developed to this stage."

This comment was version Bravo was Version Alpha with Ikara replacing ASROC. Version Charlie was Version Alpha with Ikara replacing ASROC and the inclusion of the AN/SQS-35 variable depth sonar. Version Delta, a more ambitious version, incorporated the following: (1) Ikara instead of ASROC; (2) AN/SQS-35 VDS. and (3) Removal of the aft 5-inch gun mount and provision of a flight deck and single or twin hangar for a Wessex helicopter. The Tartar launcher would be retained in place of the aft 5-inch gun.

The RAN was naturally keen to fit Ikara into the RAN's machinery plant, and Suggestion B, which included five "strategic situation had worsened". The RAN would not have been deprived of anti-submarine helicopters at sea from the loss of the Melbourne in 1982 until the introduction of the Seahawk helicopter. The RAN's anti-submarine capability would have been further enhanced by the introduction of a more capable helicopter.
The Third DDG

On 22 January 1963 it was announced that a third DDG would be built. The purchase of a third ship allowed for one DDG to be always fully operational and also was another step towards the goal of 50% of escorts being fitted with a medium range SAGW. In order to meet the 50% figure it was planned that HMAS Sydney would be fitted with Tartar. Following her tragic loss, HMAS Melbourne was at that time both an offshore patrol frigate and a harbor patrol frigate. Senator Gorton had defended the decision by pointing to the construction of a DDG in Australia as vital to the RAN's capability.

The DDGs introduced a second (albeit limited) air defences capability to the RAN. The addition of Tartar to the third DDG, HMAS Melbourne, was a significant improvement in the RAN's air defences capability. Tartar was a powerful long-range air-to-air missile and was capable of engaging aircraft at ranges of up to 100 miles.

The DDGs increased the number of weapon systems in the RAN. From the time of the DDGs' introduction the RAN had been gradually modernising its weapon systems and capabilities. The DDGs introduced a number of new weapon systems to the RAN, including Tartar, which was a significant improvement over the RAN's existing air defences capability.

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Firth Frigate Commissioned
The fifth of the Royal Australian Navy's FFG7 class frigates and the third ship to bear the name HMAS MELBOURNE joined the Navy in a traditional ceremony in Melbourne on Saturday 15 February 1992. The ceremony took place alongside Station Pier, with a sistership of the new frigate, HMAS CANBERRA, and the training ship HMAS JERVIS BAY visiting Melbourne in honour of the occasion.

MELBOURNE was the first Australian-built combatant ship commissioned into the Royal Australian Navy since the destroyer escort HMAS Torrens (launched 1970). She will be a warship to bear the name HMAS MELBOURNE on trials at Darwin on 7th February. The sixth and final member of the class in DARWIN recently completed her second tour of duty in the Persian Gulf to assist in the enforcement of economic sanctions imposed against Iraq by the United Nations. On 13 February, DARWIN sailed on her third Gulf deployment to replace her sister ship, HMAS SYDNEY.

Presentation of the Gloucester Cup by the Governor-General
Commander Martyn Bell, Mr and Mrs Hayden toasted the ship and met members of the ship's company of 234. DARWIN recently completed her second tour of duty in the Persian Gulf to assist in the enforcement of economic sanctions imposed against Iraq by the United Nations. On 13 February, DARWIN sailed on her third Gulf deployment to replace her sister ship, HMAS SYDNEY.

"Black Diggers" receive recognition
The Federal Government has recognised the service of four groups of Aboriginal Australians and Torres Strait Islanders who did not receive adequate payment for helping defend the nation during World War II. In Darwin, Mr Warren Snowden, Member for the Northern Territory, presented payments to surviving members of special units raised in northern Australia after the first bombing raids on Darwin in 1942. Mr Snowden was deputising for the Minister for Defence Science and Personnel, Mr Gordon Bilney. The members were also presented with the Defence Medal, the War Medal, and the Returned from Active Service Badge. Three members received the Australian Service Medal. Mr Bilney was honouring the Government's commitment to recognise the unrewarded service of a small number of Aboriginal people and Torres Strait Islanders - the 'Black Diggers' - who were recruited informally during the war, but never paid adequately. They were:

- The Northern Territory Special Reconnaissance Unit, which was raised to carry out reconnaissance and guerrilla warfare in Arnhem Land in the event of a Japanese landing.
- The Snake Bay Patrol, which was raised to carry out reconnaissance and patrols on Bathurst and Melville Islands.
- Selected crewmen on the Royal Australian Navy auxiliary vessels Heathcote.
and Viking, employed on coast watching and mine clearance duties in northern waters.

- Selected Aboriginal people who participated in the defense of Groote Eylandt's airfield.

**Governor-General awards battle honours to Navy Units involved in Gulf War duties**

The Governor-General, the Honourable Mr Bill Hayden, has awarded battle honours to seven RAN units involved in the Kuwait Theatre during the period of hostilities in the Gulf.

The units awarded the Battle Honour Kuwait include:
- The two supply vessels, HMAS Success and Westralia.
- The guided missile frigate (FFG) HMAS Sydney, and guided missile destroyer (DDG) HMAS Brisbane.
- Clearance Diving Team 3 (CDT3); and
- The Seahawk introduction and Training Unit.

The Battle Honour Kuwait 1991 for CDT3 will be carried by CDT1, CDT2 and CDT4 whose members formed CDT3, a unit which is only raised for operational clearance diving work.

The Battle Honour to the Seahawk introduction and Training Unit will be carried by HS 816 Squadron when it recommission as the operational Seahawk S-70B-2 Seahawk helicopter squadron this year.

**Navy Female Commander appointed**

The Royal Australian Navy has officially appointed Commander Carolyn Brand, the first female officer to take charge of an operational establishment and its fourteen warships at HMAS Wood for her new duties.

Commander Brand, who has been specially trained in mine warfare and has assumed the position of COMAUSMINEFOR (Commander Australian Mine Warfare Force), is the first woman to be appointed to the position.

Commander Brand graduated as a Mine Warfare Officer in June 1988. Later, as the executive officer of HMAS STIRLING at Quakers Hill during 1990, she was the first female executive officer to command an operational unit.

In July 1991 she was posted overseas to the Royal Navy's Second Mine Countermine Squadron, serving with the squadron on exercises and deployments prior to passing the Advanced Mine Warfare Course in November 1991.

**Navy to combat sun**

The Royal Australian Navy has recently begun the distribution of 52,000 'digger style' hats to its sailors. The move comes in line with growing public awareness to the dangers of over-exposure to the sun.

The new hat has already been issued to officers serving in Darwin and Cairns where they are proving to be very popular.

Rear Admiral Holthouse, who personally selected the new head gear, said that they would offer considerably greater protection from the sun than the traditional Navy head gear.

**Commander Martyn Bell has returned to the UK**

Commander Martyn Bell has returned to the UK to take up a new post as the Director of the Naval Staff at the Admiralty in London. Commander Bell served as the Executive Officer of HMAS OXLEY for almost six months before being selected for the new role.

**Gulf Veterans Changeover**

The Royal Australian Navy guided-missile frigate HMAS SYDNEY arrived in the Port of Fremantle on Thursday 20 February on return from the Arabian Gulf after almost six months away.

In company with SYDNEY was sister ship HMAS DARWIN which is replacing her at Australia’s contribution to the Multi-national Naval Force policing trade sanctions imposed by the United Nations on Iraq.

Commanded by Commander Lee Conder, HMAS SYDNEY has completed her third deployment to the region, having departed Australia on September 2, 1991.

HMAS DARWIN, Commanded by Commander Martin Bell has returned to the Red Sea for her third deployment.

The two Commanding Officers participated in a brief Ceremonial Handover onboard HMAS SYDNEY, witnessed by the Maritime Commander, Rear-Admiral Rob Wills, AORAN.

HMAS DARWIN, with a complement of 232 officers and sailors sailed crotone for the Gulf region on Saturday, 22 February.

**HMAS OXLEY hosts World Cup Cricket Cruise**

The Royal Australian Navy guided-missile frigate HMAS CANBERRA sailed from the Fleet Base in Woolloomooloo Bay on 19 February, with 126 players from the nine World Cup Cricket teams embarked.

The players joined the ship for the morning to be officially photographed in their new coloured playing gear, the only day all teams will be together for the five week World Cup. HMAS CANBERRA was fitted with a special scaffolding structure, erected on the ship’s helicopter deck for the overall team photo to be taken, the frigate anchoring in Farm Cove.

After the official photos HMAS CANBERRA proceeded on a short harbour cruise.

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**HMAS OXLEY arrives at HMAS STIRLING for the last time, prior to decommissioning on 7 February**

Earlier, three of the bushwalkers suffering from severe cases of hypothermia were airlifted to hospital at Cooma for treatment.

The captain of the Sea King, Lieutenant Rohan Armstrong, reported that visibility was so bad in the mountains that it took 45 minutes to relocate the remaining nine bushwalkers who were being assisted on the ground by a medical team.

The Sea King is based at the Naval Air Station, HMAS ALBATROSS at Nowra.

**First submarine to retire after 25 years service**

HMAS OXLEY, the first Royal Australian Navy submarine to be homeported in Western Australia, was retired in a Decommissioning Ceremony at HMAS STIRLING on Thursday 13 February.

Active until the end, HMAS OXLEY recently completed several days of hectic exercises with RAAF P3 Orion aircraft off the WA coast. She proudly streamed her decommissioning pennant as she entered Cockburn Sound for the last time underway on the morning of Friday, 7 February before berthing at HMAS STIRLING. Garden Island was a welcome sight for the skipper, Lieutenant Commander Neil Wallace who in the previous two days had grabbed three hours of sleep during exercises.

Commissioned at Scott’s Steelbuilding & Engineering Co., Greenock, Scotland on March 17, 1967, HMAS OXLEY was the RAN’s first postwar submarine and the first of six OBERON-class to be constructed for the RAN. During her 25 year career she steamed 403,096 nautical miles, or nearly 650,000 km.

Among those attending the Decommissioning Ceremony was the Chief of Naval Staff, Vice Admiral Ian McDougall, who was HMAS OXLEY’s first Executive Officer on her delivery voyage from the UK 25 years ago.

A number of former submariners who served in HMAS OXLEY also attended the Decommissioning Service to farewell their old boat.

After decommissioning OXLEY will be laid-up locally where she will be cannibalised for spares for her five remaining sister submarines. She will be replaced by HMAS ORION at HMAS STIRLING.

**HMAS CANBERRA hosts the nine World Cup Cricket teams, 19 February**

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The Royal Australian Navy has three separate helicopter programmes coming to fruition during the 1990s. The most visible is that for shipboard aircraft embarked on the new class of ANZAC frigates currently building at AMECON's Williamstown yard. A number of types would be appropriate for the role; the shortest list would appear to be shorter than some contractors had hoped, however, the timeframe from a final decision is 1995, according to defence sources.

The second contract is for helicopters embarked on the new Helicopter Training Ship which will replace HMAS Fervis Bay during the late 1990s. And the third, which may bear on the second, is for new up-rated and repowered versions of the Westland Sea King Mk50s and Mk56s based at HMAS Albatross, near Sydney. The latter requirement is not tightly defined at this stage, though a Defence Department source expects a selection to be made in 1992/3.

Industry sources have noted that the secondary army sealift role of the new vessel will require helicopters capable of discharging a tactically worthwhile force in an acceptable period of time (ie getting an infantry rifle company across the beach in a single wave from a position up to 40 nautical miles out to sea). This would require up to 13 Blackhawk or six or so Sea Kings. There would be insufficient flight deck space for 13 Blackhawks on a ship of the size envisaged.

There is a body of opinion within the RAN pushing for a dedicated shipboard helicopter for the support ship. "Too many boxes need the required ticks for any predictions to be made now, according to one source tand a federal election in a couple of years' time might change the RAN's circumstances significantly, but embarking Army Blackhawks does not seem to be the favoured option. Blackhawk's ship compatibility would be a problem - it does not have folding rotors and its airframe and engine are not marinised. Corrosion would take a severe toll. A Utility variant of the ASTA-assembled S-70B Seahawk now entering service with the RN might be an option; but this aircraft (a marinised Blackhawk, in effect) would not have the troop life capacity that some feel is required in the assault/utility role. On the other hand, commonality with service S-70Bs would be high.

One workable option would be an upgrade of the RAN's existing Sea King utility helicopters and the purchase of half a dozen maybe during the mid-1990s. The existing aircraft are equipped with the Bendix AGS-13 slugged sonar and MEL Lightweight Radar; updating the avionics and making minor modifications to the airframe might be more cost-effective than buying brand-new aircraft. Certainly, the RAN is likely to evaluate a number of different types of aircraft so the choice would appear to be between the Sea King and Seahawk. A further six Sea Kings would fill the tactical transport role above the Helicopter Support Ship. Short-term Sea Kings could continue to fill the land-based utility role.

The ANZAC frigate requirement, so far as it has been defined, is for something akin to a Seahawk but rather less capable -- it would have a smaller size. The ANZAC frigate has two on order and its ex-British Leader class frigates. How far a RNZN requirement for a Lynx-type aircraft would affect RAN thinking (and how far the RNZN would insist upon having Lynx, given the extra cost of Seahawk) is unclear at present.

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PERTH and YARRA — 50TH ANNIVERSARY

It was the time of Australia's gravaest peril. Little stood between us and a ruthlessly-efficient foe.

We had placed much faith in the power of our own and Allied navies to keep the enemy at bay but even our best ships were being swept aside in a saga of disasters. Our men fought heroically but the enemy was much more efficient and much better armed than we had imagined. Australians had already learned the cruelties of a war at sea which was waged over every ocean. Even amid the welter of tragedies on all fronts by land, sea and air, the names WATERHEN, PARRAMATTA and above all SYDNEY.

We also had learned the cruelties of a war at sea which was waged over every ocean. Even amid the welter of tragedies on all fronts by land, sea and air, the names WATERHEN, PARRAMATTA and above all SYDNEY.

The enormous firepower of the gallant RAN warship, the Sunda Strait after the enemy cruisers could bring to bear from their main batteries alone.

YARRA forced as she could and did her best to protect her charges which were systematically destroyed by the enemy after he had smashed the little RAN escort. She was the last to go. It was the grimiest period the RAN ever faced. Half a century on the Navy remembers.

LOSS OF HMAS PERTH

3 MARCH 1942

HMAS PERTH was built at Portsmouth Naval Dockyard and commissioned into the Royal Navy on 15 June 1936. Purchased by the Australian Government, she was commissioned into the RAN on 29 June 1939. The light cruiser displaced 6830 tons, was 169 metres long and had a beam of 17.3 metres. Her armament consisted of eight 6-inch guns, eight 4-inch dual-purpose guns, a number of automatic anti aircraft weapons and eight 21-inch torpedo tubes. She also carried a Seagull V aircraft for reconnaissance and spotting duties. Her speed was 32 knots and she carried a complement of 981.

HMAS YARRA encountered a major Japanese force of three heavy cruisers and an attendant escort. Her armament was put to the test in operations off the coast of Syria before proceeding to Australia for an extended refit. She arrived in Sydney on 12 August.

While the ship was refitting Captain H.M.L. Walker, DSO and Bar, RAN, took command on 24 October 1941. After completion of her refit the PERTH operated off eastern Australia on patrol and escort work, visiting New Caledonia and New Georgia. On 14 February 1942 the PERTH sailed for the Netherlands East Indies, arriving at Batavia (now Jakarta) on 24 February where she was attacked by Japanese aircraft that day and the next without sustaining any damage. The PERTH sailed on 25 February in company with four Royal Navy ships for Surabaya. On 26 February the ship departed Surabaya in company with the Dutch light cruisers DE RUYTER and JAVA and the heavy cruisers USS HOUSTON and HMS EXETER, two Dutch, three British and four US destroyers. The squadron, under the command of the Dutch Rear Admiral Korl Doorman, proceeded along the north coast of Madura Island, searching for a Japanese invasion convoy.

The cruise was unsuccessful but, as the ships were preparing to enter Surabaya and refuel, Admiral Doorman received information that the Japanese forces had been sighted to the north. Accordingly he steamed to intercept. In the ensuing Battle of Alpahhat on February the Allied force was soundly defeated by a Japanese force which was able to exploit its superiority in long range fire. The PERTH and HOUSTON were engaged but were not able to engage all the enemy vessels. The PERTH was hit by torpedoes and sank shortly afterwards.

Orders were received for the cruisers to sail to Tjilitjap where they refueled. The PERTH was to suffer only superficial damage while most of the destroyers were sunk or had withdrawn as their torpedoes were exhausted. The PERTH and HOUSTON were able to break off the action with the Japanese and sailed to Tjilitjap where they refueled.

The HOUSTON, still fighting but abating, was also hit by torpedoes and sank shortly afterwards.

The Japanese losses were light with one transport and one minesweeper sunk and several vessels seriously damaged.

The HOUSTON's crew abandoned ship after the second and third torpedoes, but the surf was too high for any boats to be successfully launched. Although many rafts and carley floats were destroyed, the ship was not demolished. The Japanese used the surviving destroyers and submarines to sink the HOUSTON and other ships in the vicinity.

Afterwards, the Japanese were able to continue their attacks on the Allied forces in the area.
Of the PERTH's company of 686, which included four civilian cameen staff and six RAAP personnel for operating and servicing her aircraft, only 218 including one civilian and two RAAP were eventually reequipped. The remainder having been killed during or soon after the action or died prisoners of war. Captain Walker was lost with the ship.

**LOSS OF HMAS YARRA**

The sloops HMAS YARRA was launched at the Cockatoo Dockyard, Sydney, on 28 March 1915 and commissioned on 21 January 1916. Displacing 1080 tons she was 81.6 metres long with a beam of 11.9 metres. She was armed with three 4-inch anti-aircraft guns, four 3-pounder guns, a quadruple 5-inch aircraft machine gun and depth charges. She had a speed of 16.5 knots and a complement of 151.

The YARRA's initial war service was in Australian waters on patrol and escort duties. She was commanded by Lieutenant Commander W.H. Harrington, RAN, who was eventually to become Vice Admiral Sir Hastings Harrington, CB, DSO, RAN, Chief of Naval Staff, 1962-65. In August 1940 she left for the Middle East where she was used on patrol and escort duties. On 30 April 1941 she escorted a convoy from Bombay to the Persian Gulf and later that day took part in the campaigns against Iraq and Iran. This was her last operation and she returned to Cockatoo Dockyard, Sydney, on 28 March 1941 to be laid up in March and then commissioned in April 1942. Lieutenant Commander Rankin, RAN, was appointed commander of the ship.

**Commander Robert Rankin of the YARRA**

March the ships were warred not to enter the harbour. The YARRA was ordered to take on board personnel and stores for the depot ship ANKING, the tender of the Dutch minesweeper M51, to Fremantle while the JLMUNA sailed for Colombo. No time was to be lost as powerful Japanese forces were known to be operating in the waters south of Java. Steaming south east at an average speed of 8.3 knots the YARRA and her convoy made steady progress during the night of 2/3 March. Excluding a small discordant shadowing aircraft sighted in the evening there was no sign of the enemy. On the morning of the third day two lifeboats were sighted from which the YARRA took a number of exhausted survivors of the Dutch merchant ship PARAGI, sunk by the Japanese two days earlier.

At 6.30 am on 4 March, as the sun rose the lookout in the YARRA sighted the unmistakable formations of a Japanese heavy cruiser squadron to the north east. The squadron consisted of the ATAGO, FUKAKO and MAYA, each armed with ten 5-inch guns, and two destroyers. Immediately Lieutenant Commander Rankin made a sighting report, ordered the ships of convoy to scatter and, placing his ship between them and the enemy, laid smoke and prepared to engage. The YARRA was outgunned and outnumbered and the enemy ships were faster. Against such odds her task was hopeless, yet she kept fighting even as her convoy was overwhelmed and sunk, ship by ship. The ANKING, which was carrying many RAN personnel was sunk first. Overwhelmed by many hits she was despatched in ten minutes. The YARRA was then on fire and laying heavily to port but still shooting. M51 was on fire and was put down shortly after by a hail of close automatic gunfire from one of the cruisers. The FRANCOL, too, was on fire and still remained afloat, finally succumbing at about 7.30. The YARRA, shelled by numerous hits was the last to go.

Soon after 8.00 Rankin ordered the ship abandoned. Minutes later he was killed when an 8-inch salvo hit the bridge. Leading Searman R. Taylor, manning the last remaining gun, kept on firing until he too was killed and the YARRA's guns fell silent. Her end, after close range shelling by the two Japanese destroyers was witnessed by 34 survivors on two rafts. All except the Dutch captain of the PARAGI were ratings.

When the YARRA sank, the Japanese made off to the north east after picking up one boat load of survivors from the ANKING. Left scattered over a wide area of sea was a collection of boats, rafts and floots. Towards evening a passing Dutch vessel, the TAWALL, rescued 57 officers and men from the ANKING, in spite of frantic signals, from two carry fish with hold 14 men from M51. For the next two and a half days they drifted about until picked up by the Dutch steamer TIMANOFEC on 7 March. Meanwhile the YARRA's men, their numbers being sadly reduced by wounds, exposure, and thirst, continued to drift helplessly. On 9 March thirteen of the sloops ratings were picked up by the Dutch submarine K11. Of the complement of 151, 138 including the captain and all officers were killed in the action or died subsequently on the raft.

The YARRA was outgunned and outranged and her aircraft, only 218 including one civilian and six RAAP personnel for operating and servicing her aircraft, only 218 including one civilian and two RAAP were eventually reequipped. The remainder having been killed during or soon after the action or died prisoners of war. Captain Walker was lost with the ship.

**Deficiencies Need Rectification**

In his Viewpoint article in this issue, the Navy League's Federal President Geoffrey Evans quoted Australia's Minister for Foreign Affairs (Senator Gareth Evans) in reference to Air Force's F-111s and Navy's submarines as our long range strike capabilities. However, the Minister went on to imply that our offensive capacity is limited because "we have no aircraft carriers and only limited amphibious transport-capacities.

The RAN is indeed deficient in both seaborne aircraft and amphibious lift capacity. Significantly, the major limitation on our amphibious lift capacity is in aircraft and the lack of a ship to deploy them. At present our seaborne aircraft are all helicopters:

- Sixteen "state of the art" SH-042 Seahawks are all required to operate from the AS350B Squirrels have no combat capability and are further reduced by the retirement of the six LCH, which are already approaching 20 years of age.
- The amphibious lift capability would be further reduced by the retirement of the six LCH, which are already approaching 20 years of age.
- The need to improve the ADF's amphibious lift was proven when Australia considered means of evacuating endangered Australians as Fiji is out of range of Australian land based aircraft, and we had no ship capable of operating sufficient numbers of suitable helicopters, there was no way that evacuation could be arranged. When it came to rescuing distressed Australian citizens, the ADF was helpless.

Although similar circumstances could arise in a number of the smaller nation States in our region, the evacuation of distressed civilians is by no means the only foreseeable need for a helicopter capable ship. Disaster relief, support for friendly regional neighbours and deployment of Army units
around Australian national territory are a combined basis for the requirement a combined basis for the requirement
A replacement for Jervis Bay's current amphibious lift capability is essential anyway. By spending a relatively small additional extra sum, the ADF can be provided with an essential additional amphibious lift capability.

The precise capabilities of the ship are currently being determined within Head Quarters Australian Defence Force. However, it is known that the ship (not necessarily the helicopters) would be operated by Navy in a service to Army (the amphibious lift role).

Authoritative sources suggest a ship displacing 20,000 tonnes, able to embark 4000 numbers equivalent to a battalion of troops, up to 12 utility helicopters, four medium landing craft and an 80 bed hospital should be feasible on the money allocated provisionally. This may be either a converted merchant ship or new construction. The latter is likely to be more expensive initially but more cost effective over a long life basis.

Lack of an aircraft carrier

In the context used by Senator Evans - tactically but not strategically offensive maritime operations in Australia's zone of strategic interest the current aircraft carrier implies a ship capable of operating fixed wing strike fighters and combat capable helicopters.

With the 1983 decision to scrap HMAS Melbourne and her fixed wing aircraft, Australia lost the capability to provide fighter cover for her Navy anywhere other than within 500 miles of major RAAF bases. She also lost a most effective means of providing Australian ground forces with air cover during ground attack capability on the region and in some Australian territory. There are no plans to replace this capability. Further, it is not feasible to fit the proposed helicopter capable training ship with this function.

The need for combat capable maritime warfare helicopters is being met by the FFG7s Seahawk ST02s, although as yet there is no approval to arm these with the air to surface missiles that proved so effective against fast attack craft in the Gulf War. The Navy League considers that the Anzac frigates should also be equipped with ST02s Seahawk helicopters.

Unless a new aircraft carrier is acquired, it is possible that the only way to provide Army units with an airborne ground attack capability would be by acquiring helicopter gunships. Although fixed wing ground attack aircraft are less vulnerable, their need for high grade airfields and low combat radii of action limits their effectiveness in regional and Australian national territorial operations.

Navy is known to be concerned at the lack of a fixed wing defensive fighter capability for the Fleet. To meet this in part, the number of ships with area defence surface to air missile systems will be increased by the commissioning of HMAS Ships Melbourne and Newcastle.

Other planned measures include acquiring more close in weapons systems.

The cost of some of these measures could be avoided if a new aircraft carrier were to be acquired.

However, Navy is understood to consider that the very substantial cost of a new aircraft carrier and her fixed wing aircraft would divert an unwise and unacceptable extent the very limited funds required for other projects. These include the Collins class submarines and Anzac frigates.

Therefore, the ADF will have to accept the limitations on areas of operations that the lack of seaborne fixed wing aircraft imposes on the Fleet.

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28 The Navy, April-June, 1992

29 The Navy, April-June, 1992

R. Poole Pty. Ltd.

NAVY LEAGUE/RESERVE CADET NEWS

Wile only one of 60 Naval Reserve Cadet Units, TS STURT at Renmark, South Australia, has a special character all of its own. The Unit is physically located in the old Renmark High School which, while far from the sea, has been converted to its ship's company into a "stone frigate" complete with main mast, quarterdeck and a gallery capable of loading up to 60 cadets.

The unit is commanded by Lieutenant Tom McGuire, a local fruit grower, who has served in both the Royal and Royal Australian navies. Assisting him to train the unit's 39 cadets are four instructors and a very keen body of local parents who assist with everything from transporting cadets to unit activities to the never ending "chipping and painting" that old buildings require.

Owing to no small part to this strong community support, TS STURT was recently honoured by being selected as the winner of the Navy League's Annual Efficiency Shield for 1991. This award was presented by the Chief of Naval Staff, Vice Admiral I. MacDougall, A.O. RAN at a ceremony in Renmark on Saturday 16 November 1991.

Enclosed are two photographs - one showing Vice Admiral MacDougall congratulating Lieutenant Tom McGuire when presenting him with the Efficiency Shield and the other showing the unit displaying the enthusiastic spirit of the Riverland while marching through Renmark.

In appreciation of this award, TS STURT would like to extend their thanks for the support they receive from the Navy League of Australia.

HMAS COONAWARRA wins Navy League Community Award for second time

At a ceremony commencing at 1000

which was conducted in the new gymnasium at HMS COONAWARRA on Monday 21st January this year. The Administrator of the Northern Territory, the Honourable James Muirhead, presented to the Command Officer of HMAS Coonawarra, Commander David Horsen RAN, the Navy League Community Award.

The ceremony was attended by about fifty naval personnel, headed by the new Naval Officer Commanding Northern Australia, Captain Ian Watts and about thirty members of the community. The civilian participants included, Mr Warren Snowdon MHR, Mr Max O'Reilly MLA and the Mayor of Darwin, Mr Alan Markam, plus representatives from Multiple Sclerosis, Red Cross, Wheelchair Sports Association and many others.

This was the second time HMAS Coonawarra has won this prestigious award and only the second Naval unit to have won it twice, the previous occasion was 1986. The other two-time winner is the Darwin based patrol boat, HMAS Cresnock.

HMAS Coonawarra has continually worked hard to maintain the Navy's high public profile in Northern Australia. The city of Darwin has a long and established history with the Navy in the top end. From WWII (the 5th anniversary is this year), Cyclone Tracy 1974, the FFG that carries the city's name HMAS Darwin, and now today.

Some of the activities that HMAS Coonawarra carried out in 1990-1991 (the year by which the award was presented) include:

* Raising $35,000 for the Multiple Sclerosis Society by cycling from Ayers Rock.
New Titles from Maritime Books

The British Naval Publishers, Maritime Books have recently released three new titles covering different aspects of the Royal Navy, both past and present.

Largest of the trio is The Royal Navy in Focus 1920-29. Like the other volumes in the series, this full-page reproduction publication features the best naval photography of the renowned Wright and Logan collection and with this book the added pictorial scope of the various Royal Navy ships that are included in the decade of photography are many of the surviving vessels from the Great War period and the beginnings of new construction including the County class destroyers and new generation submarines. By far the largest number of warships depicted are the V and W class destroyers, including VAMPIRE and VENDETTA. Some of the most ships depicted include HMS VULCAN, formerly a torpedo boat carrier, a seaplane tender, and more is apparent to today's modern offshore rig support vessels and most notably the ship HMAS PUMA, built to look like a tramp steamer.

The second book, British Warships and Auxiliaries 1940-91 edition was published in January. The book is a modern day guide to the Royal Navy, its ships and aircraft, from the largest frigates down to the dockyard service crafts. Each entry comprises a photo of a ship of the class, with relevant technical data and brief notes on service and civilian families. The book contains a comprehensive section in the centre completes the overall picture of the Royal Navy. The 104 page book is printed on high quality gloss paper with colour covers.

The third title from Maritime Books is The Fleet Air Arm in Focus. Part One spans the years from the birth of the Royal Naval Air Service until the early fifties. Like the other Focus books, the Fleet Air Arm is built around a selection of rare and excellent photography, in this instance not only the ships but aircraft and personnel activities on the ships' flight decks. Most of the photos are full page with some spread over two pages. The attractive aircraft transport HMS ENDEAVOUR is depicted in Sydney Harbour while another regular Australian vessel is the destroyer HMAS DRACO on the same waters. Also of interest is the HMAS FAIRY, shown as HMAS ATTACKER in 1943. Most of the Royal Navy's warships have a history of service in the Gulf Crisis and ensuing war. For the first time a wide range of Royal Navy's Gulf activities ranging from the operations of the RAN Task Groups to the work of medical teams, logistic support units, liaison officers and the dangerous work of the clearance diving team are covered in one publication.

One of the most interesting features of the Gulf coverage is the personal accounts of officers and sailors who were in the Gulf.

In addition to the Gulf coverage, Australia's Navy 1991-1992 is available at all bookshops for $16.95. Published by A.G.P.S.

Australia's Navy 1991-1992

Recommended Retail Price is $16.95 for softcover and $29.95 for hardcover.

One dollar from the sale of each copy is donated to the Sir David Martin Foundation.

GERMAN WARSHIPS

1815-1945

Volume II: U-Boats and Mines

Warfare Vessels

Eric Gröner, edited by Dieter Jung and Martin Maass

Review copy from Conway Maritime Press Ltd., 101 Fleet Street, London EC4V 9DR

This is the English translation of the standard work on German naval vessels. Eric Gröner's highly regarded book, quite simply, the most detailed and authoritative reference work ever produced on the subject. It provides data on the design, construction, dimensions, machinery and armament as well as commenting on more abstract factors like performance specifications, and service history, for around 10,000 ships and craft. This, the second volume, covers U-Boats, minesweepers and motor minesweepers.

Although Gröner himself died in 1995 his work has been continued, amended and vastly expanded by Dieter Jung and Martin Maass and the illustrations, which has been the subject of almost as much original research as the text, consists entirely of constant-scale line drawings of every ship for which sufficient information is available.

EMIGRANT SHIPS TO LUXURY LINERS

Passenger Ships to Australia and New Zealand 1845-90

by Peter Blomman

Published by University of New South Wales Press, RRP $44.95

This is an outstanding book, it brings back memories of those halcyon days of the passenger passenger liner and emigrant ships to the luxury cruise ships of today.

Within 294 pages the author has managed to include 363 ships which are supported by 253 black and white photographs and 16 plates. One cannot but help feel a tinge of sadness when one glances at the resplendent pictures of the Swan Hellenic Prince, the Star of the Orient and the S.S. Australia's Navy in the year 1991-1992 was officially launched by the Chief of Naval Staff, Vice Admiral Ian McDougal at HMAS Watson on 22 November 1991.

The 96 page glossy colour annual gives full coverage of the Navy's involvement in the Gulf Crisis and ensuing war. For the first time a wide range of Royal Navy's Gulf activities ranging from the operations of the RAN Task Groups to the work of medical teams, logistic support units, liaison officers and the dangerous work of the clearance diving team are covered in one publication. This coverage includes the often untold story of Australia which was so necessary to keep the Navy in the Gulf. One of the most interesting features of the Gulf coverage is the personal accounts of officers and sailors who were in the Gulf.

In addition to the Gulf coverage, Australia's Navy describes the many Navy activities in the year. Special features are articles covering the work of the Paluma Class survey vessels and a dozen boats in the Royal Australian Navy. The Royal Australian Navy's annual publication. This coverage includes the often untold story of Australia which was so necessary to keep the Navy in the Gulf. One of the most interesting features of the Gulf coverage is the personal accounts of officers and sailors who were in the Gulf.

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BOOK REVIEWS

"TYPE VII U-BOATS" by ROBERT C. STEYN

The author skilfully traces the development and design of the Type VII U-boat, which was the most successful type of U-boat used in World War Two. This type of U-boat was known for its advanced technology and proved to be highly successful against Allied convoys. The book covers the design characteristics of the Type VII U-boat, including its propulsion system, armament, and tactics of operation. The author also discusses the impact of this type of U-boat on the outcome of World War Two. Recommended reading for all ship lovers.

VIC JEFFERY

"THE LAST SAILING BATTLESHIP" by ANDREW LAMBERT

This book provides a detailed account of the last battleship, the Royal Navy's HMS Nelson, and the battle of Jutland in 1916. The author provides a comprehensive analysis of the battle, including the tactics and strategies employed by both sides. The book also includes numerous photographs and diagrams to illustrate the events of the battle. Recommended reading for historians and naval enthusiasts.

Andrew Lambert's new book examines the Royal Navy's role in the Napoleonic Wars and the Victorian era. The book covers the Royal Navy's involvement in the Battle of Trafalgar and the subsequent decline of the Royal Navy. The author provides a detailed analysis of the Royal Navy's role in the Napoleonic Wars, including the Battle of Trafalgar. The book also includes numerous photographs and diagrams to illustrate the events of the battle. Recommended reading for historians and naval enthusiasts.

The Royal Navy in New Zealand

This book provides a detailed account of the Royal Navy's role in New Zealand, covering the period from the 1830s to the present day. The book includes numerous photographs and diagrams to illustrate the events of the battle. Recommended reading for historians and naval enthusiasts.

VIC JEFFERY

"TYPE VII U-BOATS" is a chapter-by-chapter account of a large marine for the coming industry, only seven per cent of the present population have actually made a choice. There can be no doubt that this book, aptly titled, will be an excellent reference, is great to pick-up and simply peruse. Recommended reading for all ship lovers.
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